TECHNOLOGY DEPT.

NEW EQUIPMENT DIGEST

A Penton Publication

October, 1953

Volume 18—Number 10

PUBLIC LIBRARY
OCT 19 1953
DETROIT

Copyright 1953 by Equipment Digest Publishing Co.

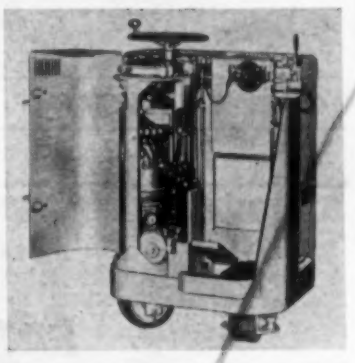
CHECK AND PASS ALONG

✓	NAME	See No.

Use Enclosed Inquiry Slips.

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

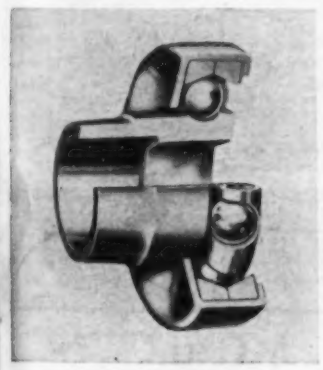
ELECTRIC INDUSTRIAL TRUCKS
designed for ease in servicing



All moving parts of power unit in line of electric industrial trucks are housed behind hinged double doors which open like book for easy servicing. Turret drive assembly can be exchanged in 30 minutes, and all brushes on unit are visible. Addition of foot extension supplies extra space for operator's feet, while leg guards are sponge rubber padded for comfort. For safety, steering wheel and controls operate within confines of unit. Travel switch, on which is located elevating control, affords three speeds both forward and reverse. Manual lowering valve controls speed of descent. Drive wheel features press-on tires, and battery slides out on rollers for quick exchange. Made by **Raymond Corp.**, 41116 Madison St., Greene, N. Y.

▲ For more details circle **NED-1 K3** on enclosed inquiry slip ▲

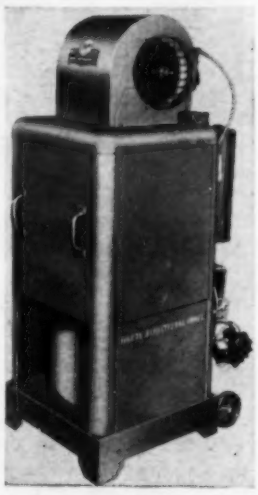
CONVEYOR ROLL BEARING
one-piece retainer separates balls



Known as the X series, this bearing for conveyor rolls has balls separated by a one-piece retainer to give quiet and low-friction operation. Currently available for all Logan roll sizes having 7/16-in. auxiliary shafts, it can be furnished with either long or short hub extension, and with steel labyrinth seals where required. It is reported that friction is so decreased that on gravity conveyor [illegible] the amount of grade required is reduced by about one-third. Made by **Logan Co.**, 216 Cabel St., Louisville, Ky.

▲ For more details circle **NED-2 K3** on enclosed inquiry slip ▲

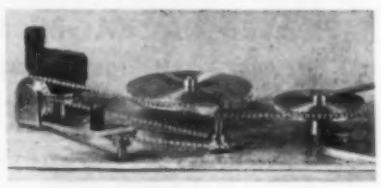
PORTABLE HEAT MACHINE
heat can be directed where required



Heavy sheet steel panels covering heat outlet openings on the model PW-189 Heat Machine portable heater can be used singly or in pairs to direct heat in one direction, or in three directions, just above the floor. Special one-direction applications include heating freight cars, parts of buildings, loading docks, drying materials, warming valves and tanks and deicing machinery and pipes. Capacity is 189,000 Btu. Made by **Fageol Heat Machine Co.**, 5725-N Mt. Elliott Ave., Detroit 11, Mich.

▲ For more details circle **NED-3 K3** on enclosed inquiry slip ▲

BEAD CHAIN DRIVES
tensile strengths from 15 to 200 lb



For positive belt drives in TV tuners, timing devices, recorders and air conditioners and similar applications, this bead chain is available with tensile strengths ranging from 15 to 200 lb. Specially designed sprockets fit the individual beads and eliminate slippage and backlash. The chain is nonkinking and offers low friction. Made by **Bead Chain Mfg. Co.**, Dept. 16, 111 Mountain Grove St., Bridgeport 5, Conn.

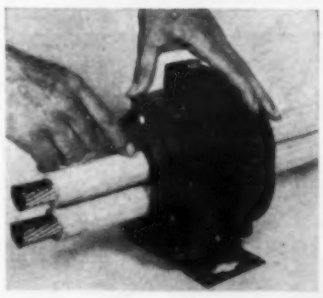
▲ For more details circle **NED-4 K3** on enclosed inquiry slip ▲

COIL SELECTOR
simplifies choice of Platecoils

The number and type of Platecoils required in a tank for specific heating requirements are quickly determined with this slide rule type selector. Platecoils are essentially two sheets of metal embossed to form channels for the passage of heating or cooling liquids and joined by resistance welding. With known size of tank in gallons or cubic feet and heating requirements, device will quickly determine the number of Btu's and sq ft of Platecoil required for the job. Offered by **Tranter Mfg., Inc.**, Platecoil Div., 525 N. Grand Ave., Lansing 4, Mich.

▲ For more details circle **NED-5 K3** on enclosed inquiry slip ▲

CURRENT TRANSFORMER
for indoor or outdoor service



Applicable to metering installations, type TWM through-type current transformer accommodates two 500-MCM stranded conductors with 600-v insulation. Unit can be mounted in practically any position. With a 200-amp primary, it has ASA classification of 0.03 with the burden B-0.1 and 0.6 with burden B-0.2. Made by **Allis-Chalmers Mfg. Co.**, 918 S. 70th St., Milwaukee 1, Wis.

▲ For more details circle **NED-6 K3** on enclosed inquiry slip ▲

FLUORESCENT LAMP
blue-green color eleminates glare

Visual comfort where precise, close work is performed is provided by this Jade-Lite fluorescent lamp which produces light in the blue-green spectral range. High in illumination value, lamp eliminates glare and reduces eye-strain. Each lamp is dated and guaranteed for 24 months, with free replacement for any tubes that burn out prior to the expiration date. Made by **Lustra Corp. of America**, Dept. JL, 36 Washington St., Brooklyn 1, N. Y.

▲ For more details circle **NED-7 K3** on enclosed inquiry slip ▲

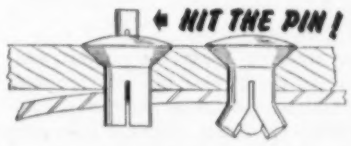
MULTI-PURPOSE MACHINE TOOL
basic unit offers many variations

Basic unit of the Rindis metal-working machine (illustrated), produces all the movements and range of speeds expected from any machine tool. A complete range of attachments is available, which converts the basic machine to any one of more than 50 different purposes. These include bandsawing, drilling, surface, thread and taper grinding, turning, sanding, milling and gearcutting. Attachment changes can be accomplished in minutes. The basic unit has 24 spindle speeds from 65 to 2800 rpm, a compound table with micrometer dials plus rack and pinion measuring 17½ x 6½ in., 1½-hp electric motor and coolant tank, pump and fittings. Distributed by **Newage International, Inc.**, 235 E. 42nd St., New York 17, N. Y.

▲ For more details circle **NED-8 K3** on enclosed inquiry slip ▲

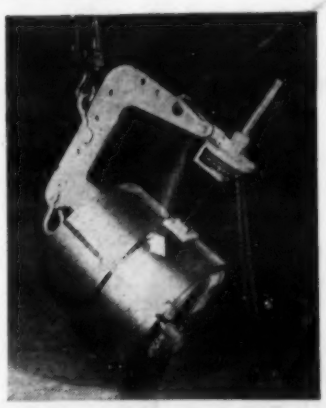
BLIND RIVET
countersunk, has oval head

Initially produced for attaching molded plywood to tubular framework, this oval head countersunk drive rivet is useful as a blind fastening for wood and metal where a finished head appearance is of importance. It can be applied from one side of the work at high speeds, and exerts a strong pulling-together force on the parts. It can be installed with an ordinary hammer, expanding the four prongs against the interior surface. Rivet is available in diameters of ⅛, 3/16 and ¼ in., and grip lengths vary from 3/32 to ⅝ in. Made by **South Chester Corp.**, Southco Div., 1413 Finance Bldg., Philadelphia 2, Pa.



▲ For more details circle **NED-9 K3** on enclosed inquiry slip ▲

COIL HANDLER
has 15,000-lb capacity



With a 15,000-lb capacity, this coil handler will pick up coils up to 48-in. wide set either horizontal or vertical, and if desired, will turn the coil through 90 degrees as the crane lifts. After it is placed on the coil, a floating pressure shoe fitted with a chain release is adjusted to coil radial thickness to bear on the outside diameter. Inner support arm has a contour surface 4½-in. wide along its full length. The handler has three bail positions to give various lifts, and a minimum width capacity of 24 in. Minimum inside diameter to outside diameter is 10 in. and ranges up to maximum of 16 in. Made by **Dixon Automatic Tool, Inc.**, 2302 23rd Ave., Rockford, Ill.

▲ For more details circle **NED-10 K3** on enclosed inquiry slip ▲

NEW! VALVAIR SPEED KING SOLENOID PILOT OPERATED CONTROL VALVES

The New Valvair Speed King line is complete — 3-way, 4-way, 4-way-5-port (2-pressure), foot-mounted or sub-base manifold mounted; pipe sizes — ¼", ⅜", ½", ¾", 1". A precedent-breaker in size, weight, speed and endurance. Get all the facts!

VALVAIR CORPORATION Affiliate: Sinclair-Collins Valve Company 947 BEARDSLEY AVE., AKRON 11, O.
REPRESENTATIVES IN PRINCIPAL CITIES

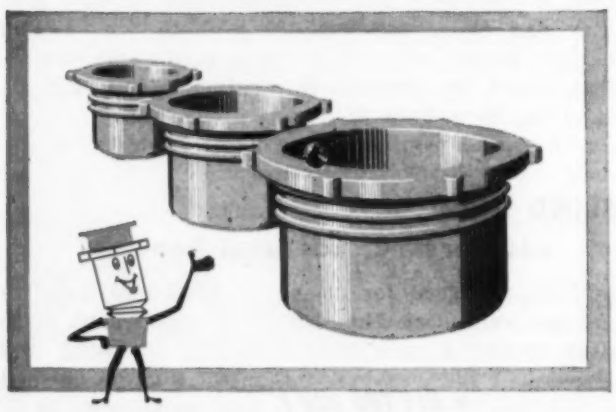
Rely Upon Valvair DIVERSATILITY

ASK FOR BULLETIN "N-10."

▲ For more details circle NED-11 K3 on enclosed inquiry slip ▲

NEW! THREADED CaPlugs

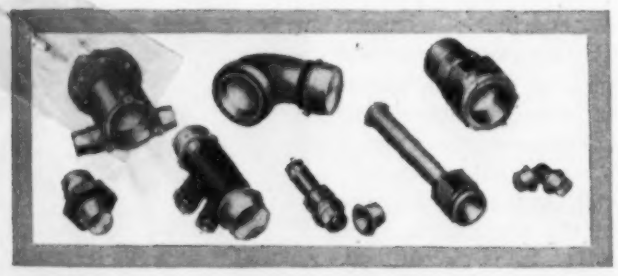
12 standard size plugs immediately available



HERE THEY ARE! 12 new threaded plugs for aircraft and hydraulic tube fittings — added to the CaPlug line of caps and plugs as result of repeated requests. Ranging in carefully graduated sizes from 5/16" - 24 thread to 2½" - 12 thread, they are promptly available from stock to meet a host of requirements.

Made from the same tough, flexible Polyethylene as regular non-threaded CaPlugs, they are impervious to all common chemical reagents, acids and solvents . . . and will not chip, break or shred under most severe conditions. Threaded at top for ease of application, they seal beyond military requirements.

LOW COST "PRODUCT INSURANCE" — Multi-purpose CaPlugs (both threaded and plain) save up to 500% over other methods of protecting tubing, fittings, valves, aircraft and hydraulic parts. Excellent dust and moisture seals, thread masks and dipping inserts — they protect products in transit, in storage and in process. Not only do CaPlugs safeguard against damage but they add much to a product's sales appeal.



TO FIT YOUR EXACT NEEDS — Standard (non-threaded) CaPlugs may be used as caps or plugs, inside or outside of threaded or plain fittings, for any diameter from ⅛" to 1½". Special sizes are available up to 3½". Caps and plugs are also designed and produced to meet special requirements. Write for catalog, price lists and free assortment of CaPlugs.

CaPlugs
DIVISION
PROTECTIVE CLOSURES CO., INC.
2209 ELMWOOD AVE., BUFFALO 22, N. Y.

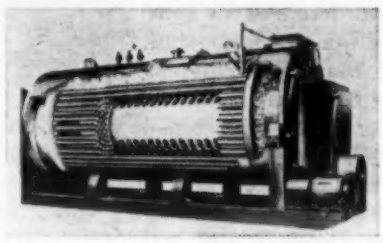
▲ For more details circle NED-12 K3 on enclosed inquiry slip ▲

TEMPERATURE REGULATOR for metal finishing solutions

With temperature ranges of 110-155 and 140-205° F, model 11-MF self-operating regulator will maintain plating solutions at a desired temperature and can be used for anodizing, bonderizing, cleaning, pickling and rinse tanks; washing and degreasing. The 4-in. dial thermometer (A) indicates solution temperature and operates from the same thermal bulb (B) as the regulator itself. Both thermal bulb and tubing are plastic covered to prevent corrosion and short circuits. Standard lengths of tubing are 8 and 15 ft, and valve sizes range from ½ through 1½ in. Regulator has double union bronze body and built-in valve stem lubricator. Made by **Powers Regulator Co.**, 3440 Oakton St., Skokie, Ill.

▲ For more details circle NED-13 K3 on enclosed inquiry slip ▲

IMPROVED PACKAGED BOILER gives easy access to fire surfaces



Simplifications and improvements in the Continental packaged boiler design make possible easy access to all fire surfaces through the use of a two-pass layout, eliminating baffles or partitions in front and rear. Units are made with ratings from 20 to 500 hp. After travel through the furnace tube, the combustion gases are forced through 3-in. return tubes with a spiraling motion, which provides maximum heat transfer and low gas temperature in the stack. Under normal operating conditions stack temperature is within 125° F of the saturated steam temperature at operating pressure. Made by **Boiler Engineering & Supply Co.**, Continental Boiler Div., 15 Manavon St., Phoenixville, Pa.

▲ For more details circle NED-14 K3 on enclosed inquiry slip ▲

Process Engineering

Pfaudler Co.—Entitled "Buyer's Guide to Pfaudler Equipment and Services," 12-page illustrated bulletin 902 gives details of services offered in process engineering field, with particular attention to the application of Glassed steel and alloy equipment. Advantages obtainable in reactors, custom-built equipment, glass-lined pipe and fittings, heat exchangers, columns, tanks and evaporators are outlined. Facilities of company for engineering and producing this equipment are covered.

▲ For more details circle NED-15 K3 on enclosed inquiry slip ▲

helps prevent colds

Production line and office workers can now work in absolute comfort

The new low priced ELECTRO MAT throws off a gentle warmth that keeps workers healthy, happy and comfortable. 14" x 21" portable foot warmer is safe and economical . . . consuming less power than a 75 Watt light bulb. It is made of high quality neoprene rubber.

Attention Employers

Increase the efficiency of your employees and help prevent colds which cause absenteeism by equipping each employee with an Electro Mat.

Mail check or money order today
Only $6.95 f.o.b. factory.

IMPORTANT SAVING: If 6 or more Electro Mats ordered price is only $5.95
Please send me: ☐ Electro Mat at $6.95 each.
Enclosed is my check ☐ money order ☐
☐ C.O.D. I am enclosing $1.00. Will pay postman balance of $5.95 plus C.O.D. and freight charges.
Name _____
Street _____ Zone ____
City _____ State _____
10 Day Money Back Guarantee
INTERSTATE RUBBER PRODUCTS CORP., Dept. 114
908 Avila St., Los Angeles 12, California

Dealer Inquiries Invited.

▲ For more details circle NED-16 K3 on enclosed inquiry slip ▲

HOLD IT!
SOLID AND ...SQUARE WITH DRILL

A must for every drill press operator! With STA-PUT, it's easy to hold odd-shaped articles securely during drilling operation. Practical, efficient STA-PUT clamps right on drill press column . . . swings out of the way when setting up work. For production work, accessory cam-locking handle available at small cost. Equip your drill presses with STA-PUT now . . . they will quickly pay for themselves in the time, money and material they save.

Sta-Put DRILL PRESS CLAMP
U.S. PATENT NO. 2613557

STA-PUTs are available in sizes to fit all standard drill presses with column diameters of 2¾", 3", 3½", 3¾" and 4"

STA-PUTs have split collars. They can be installed quickly and easily without removing drill press head.

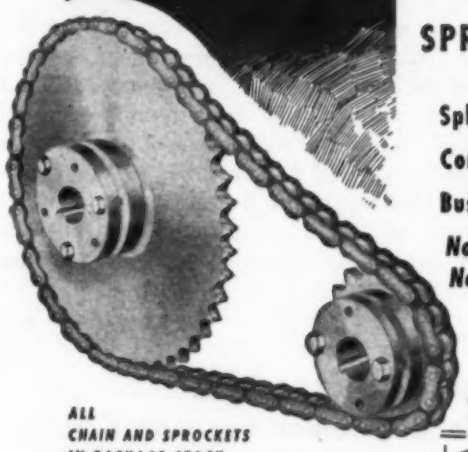
See your dealer or write for literature

No Injuries · No Broken Drills · No Rejects · No Clamps Needed

CLARK & SAWYER, INC. 2012 E. 7TH STREET LOS ANGELES 21, CALIF.

▲ For more details circle NED-17 K3 on enclosed inquiry slip ▲

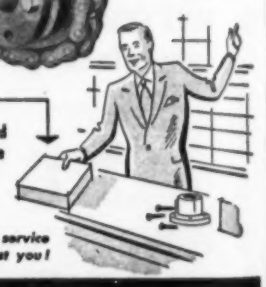
BROWNING Roller Chain Drives



SPROCKETS with Split Taper Compression Bushings
No Reboring No Welding

Write for Catalog CD10L

ALL CHAIN AND SPROCKETS IN PACKAGE STOCK



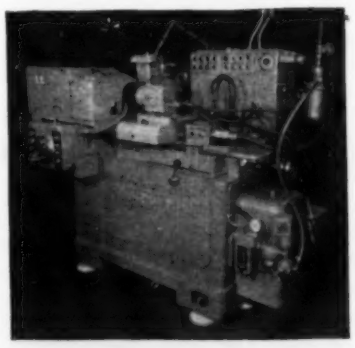
NOW! you have the same simplified BUSHING system for Single and Multiple Groove Sheaves — Rigid and Flexible Couplings — Paper Pulleys and ROLLER CHAIN SPROCKETS.

Only your Browning Distributor offers this service . . . write for the name of the one nearest you!

BROWNING MANUFACTURING COMPANY MAYSVILLE, KENTUCKY, U.S.A.

▲ For more details circle NED-18 K3 on enclosed inquiry slip ▲

PROTECT the ACCURACY of Your Machines with NEW *LEVELING* BARRYMOUNTS



When chatter mark spoil your finishes, vibra tion from an outsid source may be to blam It may come from punc presses in another part your plant, or it m come from passing tra fic or from heavy m chinery next door.

But building-borne vibr tion can't destroy t accuracy of your grin ers if you set them the new Leveling Bar mounts.

They isolate your precision grinders from building-bo vibrations that can cause chatter marks.

They absorb vibrations that destroy precise machine justments.

They keep shock and vibration from causing inconsistent eration of delicate controls.

Barrymounts cut your costs by stopping spoilage due to vibrat They're low in cost—and backed by a money-back performa guarantee. Just tell us the make and model of your grinders we'll tell you how to protect their precision. And write for b tin showing the additional advantages of these cost-cutting Le ing Barrymounts. The Barry Corporation, 752 Pleasant St Watertown 72, Mass.

▲ For more details circle NED-19 K3 on enclosed inquiry slip ▲

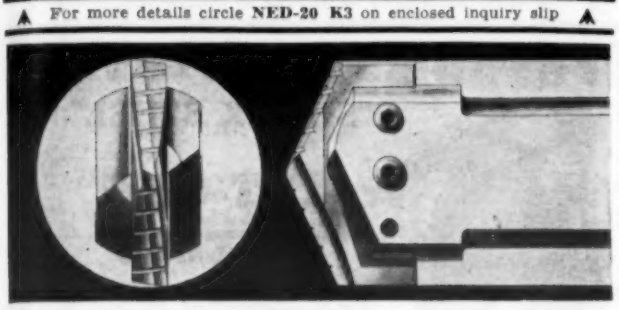
THE BEAM COMPASSES 72 inches Radius Capacity in the palm of your hand. Fast, Accurate, delightful to use. Only one hand needed to guide the scriber. The housing swings freely around the centerpin. Spring loaded lever holds beam in locked position. For the Layout Man in the shop it is

A RULE WITH SCRIBERS ON BOTH ENDS for straight line layout, quickly set to correct dimensions.

THE BOW COMPASSES six inches Radius Capacity. Quick Change, Selflocking, Slow Motion Adjustment in one mechanism of stunning simplicity. No threads, only a smooth rod and a trigger. Light weight and perfect balance.

ASK YOUR DEALER OR WRITE US FOR MORE DETAILS.
THE OMICRON CO. DEPT. E2 BOX 907, GLENDALE, CALIF.

For more details circle NED-20 K3 on enclosed inquiry slip



Drill Large Holes from the Solid with Interchangeable Spade Drills

Made in 256 cutter sizes, 1 to 5 inch diameter, in steps of 1/64, Conner type Spade Drills drill the required diameter in one operation, need no retracting to clear them of chips. Only eight sizes of holders are needed to handle all cutter sizes.

For general purpose work and in the tool room, use the cutter and holder assembly shown above. It is a tool of great rigidity, recommended for large holes of medium depth.

For production drilling, (for repetitive work), and for the somewhat deeper holes, use Conner type Oil Hole Holders, designed for easy coolant flow and fast chip explusion.

Core Drill Cutters, for semi-finishing of cored and drilled holes, made in the same 256 sizes, fit the same drill holders.

Send for Catalog and Price List

NOW made by GAIRING

THE GAIRING TOOL COMPANY
21230 Hoover Road, Detroit 32, Michigan

For more details circle NED-21 K3 on enclosed inquiry slip

Steel SHOP and TOTE *Boxes*

*In 5000 lots, F.O.B. Michigan City, Indiana

17½" long x 8" wide x 13" deep
(Inside Dimensions)

Stubborn insistence on "brand new" tote boxes may mean that you are paying for 4 boxes but getting only one. Thousands of manufacturers have been using these oil and water-tight steel boxes for years, at a great saving. You, too, can save! Just tell us how many you need. We'll give you the lowest prices.

BARNES and SMITH CORPORATION
6521-C W. State Street • Milwaukee 13, Wis.

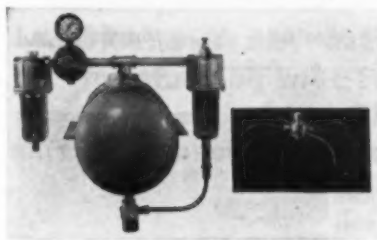
For more details circle NED-22 K3 on enclosed inquiry slip

COMPRESSOR UNLOADER adjustable for desired pressure

Adjustable to any desired pressure, this compressor unloader fully relieves the load from the compressor and engine when the desired pressure is reached in the receiver. Unit is installed in the air line, and operates independently of compressor springs and valves. Made by **Bud Mfg. Co.**, P. O. Box 367, Pulaski, N. Y.

For more details circle NED-23 K3 on enclosed inquiry slip

TOOL COOLING SET-UP accommodates up to 16 operations

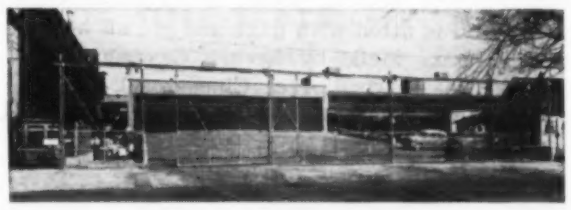


Completely portable so that it can be converted for different operations or positions to meet changing work demands, Acro Lo-Jet coolant system is designed to accommodate up to 16 cutting operations. It is reported to permit taking full cuts and eliminates objectionable odor, smoke and allergy problems of usual coolant set-ups. System cools the cutting tool and not the chip. Developed by **Air Conversion Research Corp.**, Dept. NED, 4107 N. Damen Ave., Chicago 18, Ill.

For more details circle NED-24 K3 on enclosed inquiry slip

FENCE GATES electrically operated by push button

These Reallock fence gates are electrically operated and can be controlled by push button from the guard house. Installation pictured consists of five slide



gates operating on a 104-ft overhead track, operated by reversible electric motors which permit them to open part way and close from that point. Rotary limit switches automatically stop the gates when fully open or closed, and a quick "disconnect" allows reversion to manual operation at any time. Made by **Colorado Fuel & Iron Corp.**, Wickwire Spencer Steel Div., Wickwire Bldg. Offices, 361 Delaware Ave., Buffalo 2, N. Y.

For more details circle NED-25 K3 on enclosed inquiry slip

For quickly and easily pulling bearings, bushings, and liners on electric motors

. . . use the Duff-Norton remote controlled "Lo-Hite" Hydraulic Jack with detached independent pump. The ram when closed is only 4½ inches high, yet can safely move 30 tons 2 inches in any direction. The independent pumping mechanism is connected to the jacking ram by an 8-foot flexible rubber hose. Safe, sturdy, precision-built for trouble-free service, the "Lo-Hite" is winning new users everywhere.

Write to the world's oldest and largest manufacturer of lifting jacks for Bulletin AD-3N, The Duff-Norton Mfg. Co., P. O. Box 1889, Pittsburgh 30, Pa. Canadian plant—Toronto 6, Ontario.

DUFF-NORTON JACKS
"Giving Industry a Lift Since 1883"

For more details circle NED-26 K3 on enclosed inquiry slip

Stop Slamming Doors!

KANT-SLAM HYDRAULIC **Door Check**

Closes Stops Large or Small Doors, Screen Doors and Gates Easily, Gently, Smoothly Slamming . . . Banging . . . Broken Door Glass . . . Insects . . . Drafts . . . Heat Loss

$9.95 DELIVERED

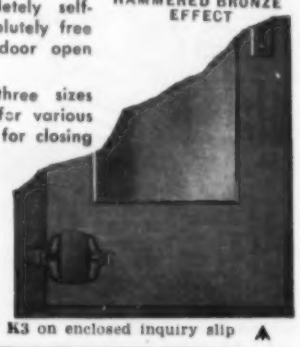
THOUSANDS IN DAILY USE IN EVERY STATE IN U. S.
SCHOOLS, HOSPITALS, FACTORIES, WAREHOUSES, OFFICES, INSTITUTIONS PUBLIC BUILDINGS
ATTRACTIVE, DARK BRONZE, METALLIC LACQUER FINISH—HAMMERED BRONZE EFFECT

KANT-SLAM closes doors with efficiency of human hand. Hydraulic action—NOT an air check—piston works in oil. 3 years trouble-free service guaranteed. Price about half of other hydraulic controls.

Works any place along hinge side of door—top, middle or bottom—either right or left hand doors. KANT-SLAM is completely self-contained—door and hinges are absolutely free of any strain or pressure. Holds door open when past 90 degrees.

Only one size Check required—three sizes easily detachable springs available for various size doors. Simple screw adjustment for closing speed.

Order on 30 Days FREE TRIAL—or Write for Complete Details

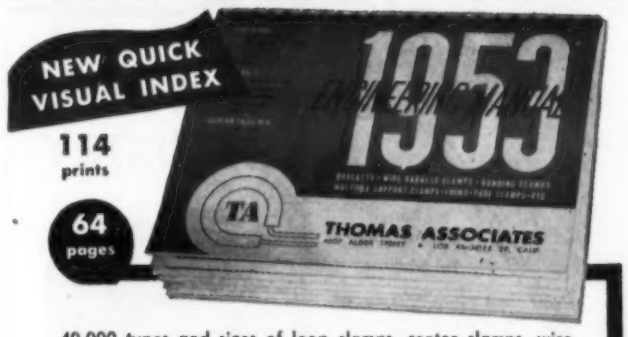


KANT-SLAM Door Check Co.
15 W. Spring St., Bloomfield, Ind.

For more details circle NED-27 K3 on enclosed inquiry slip

Send for Your Copy of This New

ENGINEERING MANUAL



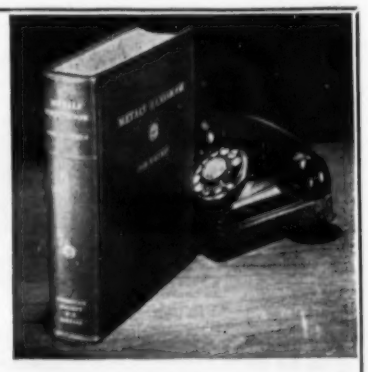
40,000 types and sizes of loop clamps, center clamps, wire harness clamps, wave guide clamps, bonding clamps, multiple clamps, *plus* blocks, brackets, busbars, line supports, shims and related items.

Save design, tool and production time and expense with TA Standards. Clamp sizes range from miniatures of ⅛" on up to 6" diameter in 1/16ths for bolt mountings from #4 to ⅜". Available in aluminum, steel and stainless steel. Wide variety of cushioning materials for service from −130°F to +1200°F. New Engineering Manual *tells all*, lists many new items. For your free copy write Thomas Associates, 4607 Alger Street, Los Angeles 39, California.

TA THOMAS ASSOCIATES
Reg. U.S. Pat. Off. Los Angeles, Calif. • Coffeyville, Kans. • Hagerstown, Md.

For more details circle NED-28 K3 on enclosed inquiry slip

The Metals Handbook



1332 Large pages
1752 Illustrations
1057 Tables
803 Articles
1,620,000 Words
40,000 Copies in use

Here is a book without a competitor . . . a book 25 years in the making. The current, 7th edition of the Metals Handbook was compiled and written by 68 committees of the American Society for Metals; more than 500 metals engineers were hand picked by the Society as the top experts, the men best qualified to write the most authoritative possible reference book on metals, metal properties, fabrication and uses. The book they wrote is the Metals Handbook. It is divided into 37 principal sections, and contains 803 separate articles and data sheets on metals, metal shaping, forming, heat treating, welding, machining, foundry work, cleaning, finishing, testing, inspection, control and research techniques. All metals, all processes are included. The 64-page index and 4-page section on how to use the book make it easy for any reader to find what he wants. Over 40,000 copies of this edition are now in use by engineers, metallurgists, designers, production men, executives, purchasing agents and others. Order your copy today by returning the coupon below. The price is $15.00.

American Society for Metals, Room 304
7309 Euclid Ave., Cleveland 3, Ohio

Rush me a copy of the Metals Handbook.

Name _____
Company _____
Address _____
City _____ Zone _____ State _____

☐ $15.00 Enclosed ☐ Bill me.

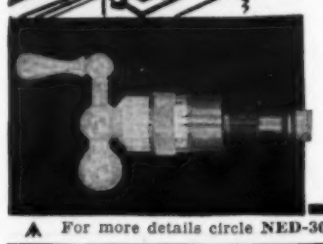
For more details circle NED-29 K3 on enclosed inquiry slip

TROUBLE WITH CLOSE TOLERANCES ON YOUR LATHES?

Solve the problem with a Microturn Lathe Attachment. Enables inexperienced lathe hands to adjust to and hold tolerances as close as 0.0001".

The regular cross-feed screw uses an 8 or 10 pitch thread; however, the Microturn is controlled by an 80 pitch thread. Where the dial of the regular cross-feed screw is divided into 1/1000 of an inch, the micrometer type dial of the Microturn is divided into increments of 1/10,000 of an inch.

The Microturn Lathe Attachment is easily coupled with the regular cross-feed screw. However, it operates independently of the regular cross-feed screw, does not depend upon it for accuracy and does not effect the normal operation of the lathe. You are able to rough material down using the regular cross-feed screw and then use the Microturn for finish dimensions.



Microturn can very easily solve your close tolerance problems. Contact us, listing your lathes, for a speedy reply.

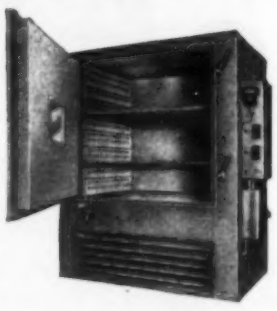
L. G. ARPIN CO. Dept. D
261 Hurlbut St, Orange, N. J.

For more details circle NED-30 K3 on enclosed inquiry slip

Hotpack TRADE MARK

SEND FOR CATALOG

OVENS For INDUSTRY



Range ROOM TEMP. to 600° F.

Temp. Dif. 5° F.

HOTPACK forced draft ovens permit large loads and quick treatment with each article receiving the same amount of heat.

These units are especially effective in baking, sterilizing, heat treating, and conditioning, dehydrating and aging where uniform temperatures of heavy loads or large quantities are required.

Capacities 12 cu ft to 250 cu ft.

THE ELECTRIC Hotpack COMPANY, Inc.
5063 COTTMAN STREET, PHILADELPHIA 35, PA.

For more details circle NED-31 K3 on enclosed inquiry slip

15,000 TYPES, SIZES & RATINGS to meet your heating needs!

CHROMALOX Electric HEATERS

INCREASE PRODUCTION . . . DECREASE COST WITH THESE LOW-COST PRODUCTION TOOLS

Use Chromalox Electric Heaters to heat liquids, air and gases. Use them to heat platens, dies, molds and moving metal parts. Use them anywhere you want fast, economical and easy-to-control heat for production line processing. Chromalox Heaters are simple to install, efficient, come in types, sizes and ratings for working temperatures up to 1100° F. Most are available from stock.

FOR IDEAS ON HOW TO USE CHROMALOX HEATERS
WRITE FOR THIS HANDBOOK

IB-31

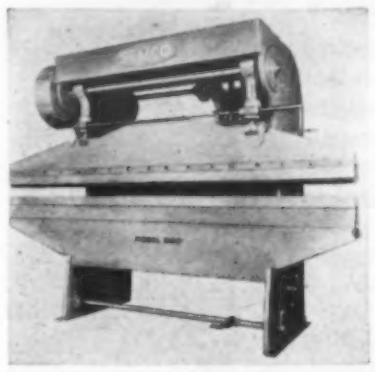
Industrial Div., EDWIN L. WIEGAND CO., 7509 Thomas Blvd., Pittsburgh 8, Pa.

See other ad on pg. 69

CHROMALOX
ELECTRIC HEAT FOR MODERN INDUSTRY

For more details circle NED-32 K3 on enclosed inquiry slip

PRESS BRAKES in 6 and 8-ft sizes



Made in 6 and 8-ft sizes, two press brakes have a 12-in. shut height together with a 3-in. stroke and 4½-in. stroke adjustment. A variable range of 16 to 40 strokes per minute is obtained by hand wheel adjustment. The frame is welded, normalized and then machined in one piece for accuracy, and the eccentric crankshaft is a one-piece alloy steel forging. Other features include generous use of antifriction bearings and a foot treadle adjustable to any bed position with uniform action at any point. Made by **Service Machine Co.**, 202 Miller St., Elizabeth 4, N. J.

For more details circle NED-33 K3 on enclosed inquiry slip

FLOOR MACHINE multipurpose, brush speed is 172 rpm

The Tornado all-purpose floor machine is designed to accommodate a wide variety of attachments, including brushes, sanding and polishing pads, and grinding disks. Heavy duty motor drives the attachment spindle at 172 rpm through a set of helical gears at a 10:1 reduction ratio. Other features include starting switch at each side of handle also controlling the cleaning solution flow; handle adjustment from 30 degrees to vertical; retracting neoprene wheels; provision for easy attachment coupling; and corrosion resistant plastic solution tank. Tank has a 4-gallon capacity and is fitted with gage and on, off and drain position valve. Made by **Breuer Electric Mfg. Co.**, 5106A N. Ravenswood Ave., Chicago 40, Ill.

For more details circle NED-34 K3 on enclosed inquiry slip

Fine Bulk Materials Conveyor

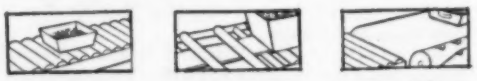
Fuller Co.—"All the way by air" is the way fine flours and other dry, pulverized materials are moved through sealed pipes in the Airveyor system, described and illustrated in 16-page bulletin No. AF-100. In this system, material moves in a stream of air flowing at velocities sufficient to support the material. It can be tailor-made for large or small plants, with automatic control panels from which one man can direct the flow to any point.

For more details circle NED-35 K3 on enclosed inquiry slip

X-Series

Low-Friction Bearing For Conveyor Rolls

Logan leads again—with the most important bearing development for conveyor rolls in twenty years. Now available at about same price as regular conveyor bearings. Note: 33% less grade required on gravity conveyor lines. Write for folder on X-Series, today.



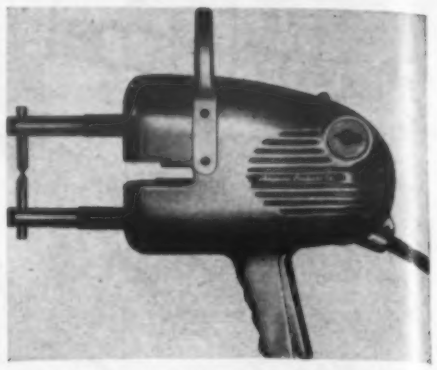
For Roller Conveyors — For Live Roll Conveyors — For Belt Conveyors

LOGAN CO., 215 CABEL ST., LOUISVILLE, KY.

For more details circle NED-36 K3 on enclosed inquiry slip

Ampower PORTABLE SPOT WELDER

Regardless of your previous Experience with PORTABLE SPOT WELDERS



Model 5201 220-440V-60C-AC WEIGHS ONLY 26 POUNDS!

Check these exclusive AMPOWER features

- WELDS ALUMINUM (Most alloys) and STEEL
- HIGH ELECTRODE PRESSURE Up to 1000 lbs. by adjustment of tip
- CONTROL OF TIMING CYCLE From 1/60 of second to full second
- FAST SPOT WELD As fast as operator can squeeze handle
- ELECTRONIC TIMING SWITCH Thyratron controlled—enclosed in Unit. Takes guess-work out of Spot Welding
- WELDS METALS UP TO 3/16 inches Steel, mild and Stainless, galvanized, cadmium plated
- THROAT DEPTH OF 7 INCHES with 3 inch opening (Standard Models)
- CONSISTENTLY GOOD —UNIFORM WELDS Increase Production—Save Money

Ampower has an unlimited number of applications—many jobs that a spot welder this size is not expected to do. Ideal, especially for "hard to get at" places. Pistol grip assures easy operating and handling.
Electronic controls, transformer and switch are all contained in highly polished aluminum housing.
Also available at small extra cost is a stand into which welder can be quickly mounted and used as foot operated floor model suitable for semi-production work.
An outstanding, dependable spot welder

Write today for FREE folder, price list and address of your nearest Jobber.

AMPOWER PROD. CO., 5737 W. 87th St., Oak Lawn, Ill.

For more details circle NED-37 K3 on enclosed inquiry slip

"SHOCK STEEL" CUT-OFF WHEELS

Special Shock Steel composition absorbs abuse which causes many wheels to shatter, and gives longer runs betweent grinds. Precision bevels, and special hardening give you this line of hi-performance wheels for pipe and tube cutting on wall thicknesses including ⅝ inch. Wheel sizes to fit all makes of rotary cut-off machines. Increases production when used as replacement for most abrasive cut-off methods.

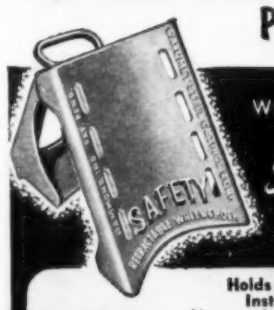
$5.25 FOR OUR POPULAR 7"x3/16" WHEEL (Quantity Discounts)

Write for our brochure and price list, and tell us about your cutting problems. Our Special wheels are at work on many an unusual job.

QUICK-SHEAR WHEEL CO.
5240 W. WINONA AVENUE
CHICAGO 30, ILLINOIS

For more details circle NED-38 K3 on enclosed inquiry slip

Stop Accidents! Prevent Movement of Parked Trucks, Trailers!



WITH CASTEEL *Safety Retractable* WHEEL CHOCKS

Holds Any Vehicle Safely . . . Releases Instantly . . . Can't Wedge or Move

Here—at last—is a *retractable* wheel chock, capable of holding any vehicle or load safely yet releases instantly regardless of how tight it's wedged under the tire. Casteel Safety Retractable Wheel Chocks eliminate dock accidents during loading with heavy fork trucks by keeping the unit securely held against the dock—preventing forward movement of the vehicle. Casteel Wheel Chock's retractable feature saves time when chock is removed . . . prevents dock tie-ups, increases operating efficiency, encourages chock use and promotes safety and safety consciousness. Made of alloy steel, (80,000 lb. per sq. in. tensile strength), with a wide curved bearing plate, Casteel Safety Retractable Wheel Chocks are your best insurance against costly accidents. Chock Holder which may be welded or bolted to dock or truck available. Write for prices and illustrated literature.

Casteel Safety Wheel Chock in open position. Note wide bearing on tire.

Step on the handle and Chock moves backward away from tire to closed position.

CALUMET STEEL CASTINGS CORP.
1648 Summer Street Hammond, Indiana

For more details circle NED-39 K3 on enclosed inquiry slip

WHERE R-B PUNCHES Cut Your Costs . . .

● IN DIE DESIGNING

. . . you save "board time" by working with the standardized R-B concept of punches, die buttons, punch retainers and die button retainers. R-B standardized equipment reduces drafting time to cut your costs.

IN DIE CONSTRUCTION

. . . you save "building time" because R-B punches, die buttons, punch retainers and die button retainers are furnished completely finished. R-B saves skilled die-maker's time to cut your costs.

IN DIE OPERATION

. . . you save "press time" because R-B punches and die buttons are instantly removed and replacements quickly inserted. Inherent accurate alignment and positive locking keep press down-time at a minimum to cut your costs.

Use R-B Engineering Service for Your Tough Piercing Problems

RICHARD BROTHERS PUNCH DIVISION
ALLIED PRODUCTS CORPORATION
DEPT. 73 • 12629 BURT ROAD • DETROIT 23, MICHIGAN

Also Produced in OTHER ALLIED PLANTS
SPECIAL COLD FORGED PARTS • STANDARD CAP SCREWS
PRECISION GROUND PARTS • SHEET METAL DIES MADE OF FERROUS ALLOYS, ZINC ALLOYS OR PLASTICS

▲ For more details circle NED-40 K3 on enclosed inquiry slip ▲

ATTENTION DESIGNERS!

ONLY THE *New Advanced* CARTER CYLINDER GIVES YOU THESE FEATURES

CARTER

- Greater Power
- More Compactness
- Higher Safety Factors
- Less Maintenance
- More Versatility

. . . AND LOWER COST TOO!

The most "designable" cylinders in America today! That's what designers think about the new Carter line. They're so compact, powerful, foolproof, and reasonable in cost that they fit in anywhere. To make your product better, more dependable, and less expensive to build or maintain, check on the new complete Carter line today.

AIR

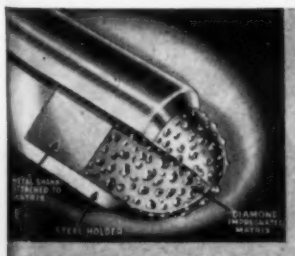
Send for your copy of the complete CARTER Air Cylinder Bulletin No. 100 for information on parts, prices, dimensions, specifications, and mounting styles.

HYDRAULIC

Free bulletins on both the CARTER 750 psi series and the 1500 psi hydraulic series. All essential information. Write for Bulletin 750 or Bulletin 1500, or both.

Carter Controls, inc.
2800 Bernice Road • Lansing, Illinois • Phone 1305
"America's Newest Line of Cylinders"

▲ For more details circle NED-41 K3 on enclosed inquiry slip ▲



ECONOMICAL WHEEL DRESSING...

. . . with Diamond Impregnated Dressers

80% COST SAVINGS . . . the cost difference between Diamond Impregnated and single point Diamonds is passed on to you.

INCREASES CUTTING EFFICIENCY . . . many small Diamonds reduce the area of diamond contact on the wheel.

EASIER TO USE . . . no special adaptors . . no moving parts . . . by slightly turning the tool, new cutting surfaces are available.

NO REMOUNTING COSTS . . . the entire Diamond Impregnated matrix can be used up.

LOSS AND BREAKAGE MINIMIZED . . . single Diamonds are expensive . . . many small Diamonds reduce the risk from loss and breakage.

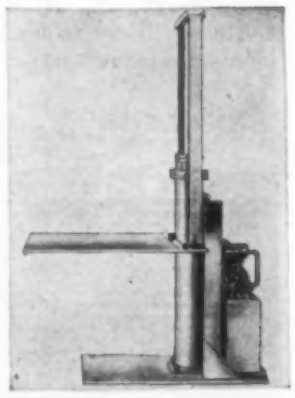
Send for Catalog

Representatives in Principal Cities

DIAMOND PRODUCTS, INC.
323 Prospect Ave. • Elyria, Ohio
Pioneering in Diamond Impregnated Products Since 1932

▲ For more details circle NED-42 K3 on enclosed inquiry slip ▲

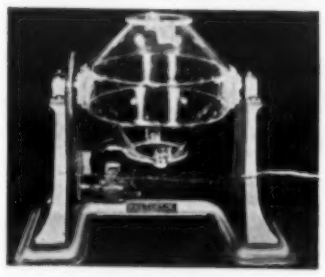
ELEVATING FEED TABLE has lifting capacity of 750 lb



Many lifting and loading jobs as well as machine feeding operations are facilitated with this OiLIFT machine feed elevating table. Semiportable and oil-hydraulic powered by means of compressed air or integral electric pump, it can be placed alongside a press, cutter, conveyor belt or other equipment. It keeps the stock pile level with the surface of the feeding platform. Caster-mounted model is also available. It has a 3 x 3 ft table and capacity of 750 lb. Made by **Globe Hoist Co.**, 1002 E. Mermaid Lane, Philadelphia 18, Pa.

▲ For more details circle NED-43 K3 on enclosed inquiry slip ▲

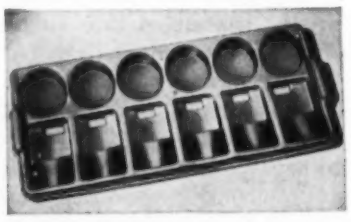
LABORATORY DRY BLENDER for studying wide range of problems



For research and study of a wide range of dry blending problems, type L-P laboratory blender has lightweight aluminum frame, integrally mounted motor drive and clear plastic container with a batch capacity of 0.31 cu ft. It will blend any materials weighing up to 100 lb per cubic foot. Types of study which can be made include effects of changes in blending times; in materials consistency and density; effects of size and shape of particles; and general studies such as adherence of particles to each other or to blender walls and particle breakage. Made by **Patterson Foundry & Machine Co.**, 123 Helene Ave., East Liverpool, O.

▲ For more details circle NED-44 K3 on enclosed inquiry slip ▲

PLASTIC TOTE TRAYS noncorrosive and easy stacking



Advantages claimed for plastic tote trays are light weight, long service life, low maintenance, cleanliness, noncorrosiveness and ease of stacking. If dropped, they retain their shape and are not easily damaged. Trays do not scratch machined parts. Different colors are available. Made by **Klise Mfg. Co.**, Dept. NE, 50 Cottage Grove St. S.W., Grand Rapids 2, Mich.

▲ For more details circle NED-45 K3 on enclosed inquiry slip ▲

NEW!

Module Test Cabinets for —100, —60, —30, 0 to 30°F.

New flexibility! New accuracy! New economy! HUDSON BAY® Module Cabinets are individually refrigerated and controlled, can be nested in any sequence, require only plug-in connections. You buy only the temperature ranges needed. Provide close control in four ranges for cloud and pour tests (with up to 16 sleeves) and all general purpose lab testing. With counter-balanced lid and warranted air-cooled compressor units. Write for complete specifications.

HUDSON BAY DIV.
REFRIGERATION SYSTEMS, INC.
646 W. Washington Blvd., Div. N, Chicago 6, Ill.
Representatives in Principal Cities

▲ For more details circle NED-46 K3 on enclosed inquiry slip ▲

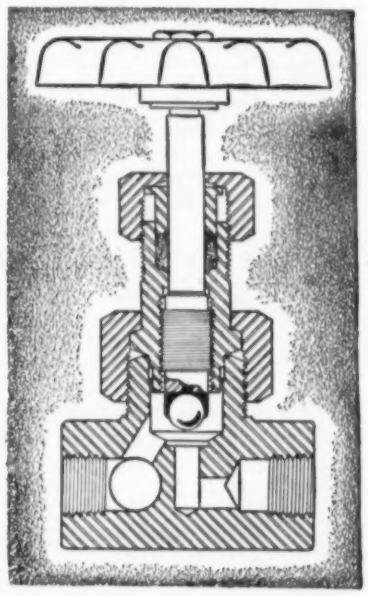
Off-center pickup for odd-shaped pieces is *easily and quickly accomplished* with a Caldwell EQUALIZING Sling. The cable locks frictionally in the saddle as soon as the weight comes on, yet releases instantly when the piece is set down. The crane operator moves his hook to set the saddle wherever he wants it — for either a level or tilted carry as desired. Made in 9 sizes from 3/4 to 28-ton capacity. Used daily in hundreds of prominent shops. *Write for detailed literature on all ADJUST-A-LEG slings.*

THE CALDWELL CO., 1830 CAMP AVE., ROCKFORD, ILL.

▲ For more details circle NED-47 K3 on enclosed inquiry slip ▲

NEW!

BALL VALVE for liquids, gas or steam



Here's a radically-new forged steel valve for general heavy industrial use. Can't leak . . . practically never wears out . . . costs little or no more than ordinary valves!

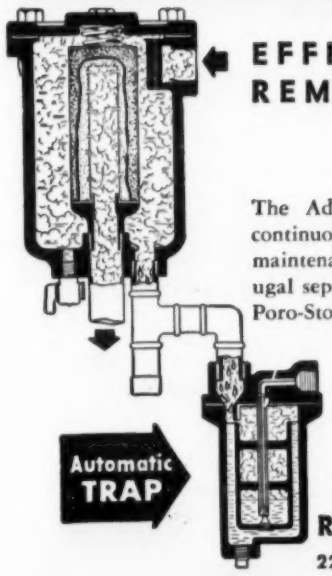
In place of a disc or plug, the new Foxboro Ball Valve has a retained, free-rolling stainless steel ball that exposes new surface to seat at every closing.

Foxboro Ball Valves handle pressures to 3000 psi. Available in straight-thru and angle types. Two or four connections to simplify piping. ¼" size. Write for detailed folder. **The Foxboro Company, 663 Neponset Avenue, Foxboro, Mass., U.S.A.**

FOXBORO INSTRUMENTATION
REG. U.S. PAT. OFF.

▲ For more details circle NED-48 K3 on enclosed inquiry slip ▲

Poro-Stone Filtration FOR COMPRESSED AIR



EFFICIENTLY REMOVES:

OIL, WATER PIPE SCALE

The Adams *Poro-Stone* Filter gives continuous service without attention or maintenance expense. Efficient centrifugal separation *plus* diffusion through Poro-Stone, removes contamination completely without pressure loss. Automatic Trap eliminates attention and assures continuous and efficient filter operation. Write for complete data—Bulletin 176.

R. P. ADAMS CO., INC.
227 E. Park Dr., Buffalo 17, N. Y.

ADAMS *Poro-Stone* AIR FILTER

▲ For more details circle NED-49 K3 on enclosed inquiry slip ▲

154 ideas on ways to use...

154 varied applications of molybdenum sulfide in the shop and in the field are described in a new booklet now available. This solid-film lubricant has demonstrated unique anti-friction properties under conditions of extreme pressure, high velocity, elevated temperature, or chemical attack.

The 40-page booklet contains the records of solved lubrication problems—some might solve your own.

Moly-sulfide
A LITTLE DOES A LOT

The lubricant for extreme conditions

MS-6A

Climax Molybdenum Company
500 Fifth Avenue, New York City 36, N.Y.

▲ For more details circle NED-50 K3 on enclosed inquiry slip ▲

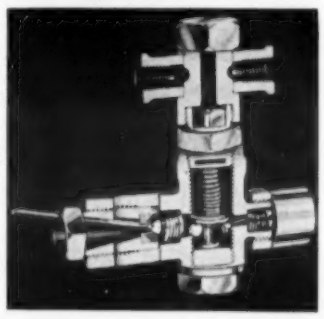
SHEAR & CUTTER for use with many materials

Built in 16, 20, 24, 30 and 36-in. sizes, Universal Cutters will cut to accurate dimensions a wide range of materials such as paper, heavy cardboard, mounting boards, film, leather, rubber, plastics and light gage metals. Features include steel frame and bed, self-honing tool steel knife, steel measuring scale and self-adjusting rubber - lined clamp. Safety latch and swing clamp are available for preventing injury to operator's fingers.

Other attachments include floor stand, parallel clamp, foot operated clamping pedal and swing clamp. Made by **Laukhuff Mfg. Corp.**, 2979 N. 30th St., Milwaukee 10, Wis.

▲ For more details circle NED-52 K3 on enclosed inquiry slip ▲

ROD ACTUATED AIR VALVE applicable to all type mechanisms features integral exhaust valve



The lever which opens and closes this Wobble-Rod valve with integral exhaust is a hardened rod which is so swiveled that the free end can move vertically, laterally, diagonally or in arcs or circles. Thus, valve can be actuated mechanically or electrically by all manner of motions. It can be spring loaded to remain normally open rather than normally closed. Internal exhaust will discharge an air cylinder, line or receiver automatically when valve closes. Exhaust can be eliminated when not needed in circuit. Two valves can be assembled into single unit for wide range of circuit arrangement.

Constructed of noncorrosive metals, this control is adaptable to pressures up to 125 psig and has open valve diameter of ¼-in. It commonly is used as pilot to actuate larger controls. Right and left hand ¼-in. outlets contribute to the versatility of valve's installation. Double-ended inlet can be rotated and clamped through a full 360 degrees. Drilled and tapped flange permits panel or bracket mounting. Made by **Pantex Mfg. Co.**, 521 Roosevelt Ave., Pawtucket, R. I.

▲ For more details circle NED-53 K3 on enclosed inquiry slip ▲

DIAPHRAGMS

FOR ALL INDUSTRIAL APPLICATIONS

One of Acushnet's many specializations is in the field of diaphragms. We have achieved notable success in the design, development and molding of all types of diaphragms, with or without fabric inserts, from the size of a dime up to three feet in diameter.

Special stocks are expertly compounded with properties to resist various fluids and gases, extreme high or low temperatures, or combinations of these requirements. We are equipped to produce rubber diaphragms bonded to metal.

Acushnet PROCESS COMPANY

Send for your copy of the Acushnet Rubber Handbook, a comprehensive rubber data reference for all types of molded rubber parts.

Address correspondence to 782 Belleville Ave., New Bedford, Mass.

▲ For more details circle NED-55 K3 on enclosed inquiry slip ▲

THREAD CUTTING SCREWS

Save time; hold tight. Cut their own perfect mating threads in work.

PHEOLL

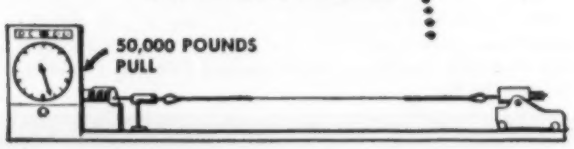
MFG. CO., 5700 ROOSEVELT ROAD, CHICAGO 50, ILL.

▲ For more details circle NED-56 K3 on enclosed inquiry slip ▲

This is what we call a "DEAD-END"

If you just hand wrap it around a *strand, rope or rod, like this...*

you can pull, like this...



until the *strand*, rope or rod breaks,

But the "Dead-End" never lets go!

Among its many profitable and proved applications are:

1. Guying poles, structures, trees, derricks and so on, to assure maximum possible strength and maximum economy.
2. Dead-ending ground or messenger strand and conductors of transmission and distribution lines.
3. Anchoring "service drops".
4. Securing catenary strands; i.e., in industrial plants from which lighting fixtures or other devices are suspended.
5. Providing non-slip ends for tennis net cables.
6. Custom-building slings.
7. Anchoring concrete reinforcing rods.

If you have a "holding" or "dead-ending" problem, ask for details about PLP "Dead-Ends". Write or telephone Cleveland: EXpress 1-3571.

PREFORMED LINE PRODUCTS CO.
5349 ST. CLAIR AVENUE
CLEVELAND 3, OHIO

▲ For more details circle NED-51 K3 on enclosed inquiry slip ▲

Severance REGRINDING SERVICE

RECONDITIONING TO *New Tool* PERFORMANCE AT A FRACTION OF *New Tool* COST

HIGH SPEED *We Regrind* MIDGET MILLS • ROTARY FILES • BURRS • COUNTERSINKS • COUNTERBORES • END MILLS • MILLING CUTTERS • REAMERS **CARBIDE**

AMERICAN MAJOR INDUSTRIES FINDS IT PAYS

American Major Industries are now sending their dull cutters to Severance for regrinding because they know (1) strategic material is being conserved (2) quick deliveries are assured (3) their reconditioned tools will give new-tool performance, and (4) their production costs are lowered. This SEVERANCE SERVICE is paying-out for others—It will Pay you too!

At SEVERANCE, New-Tool Craftsmen, using the same precise skill and care that they do in grinding new tools, regrind your cutters. Send in your dull cutters today!

SEND YOUR DULL CUTTERS TO

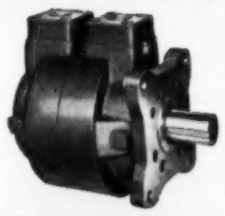
Severance TOOL INDUSTRIES INC.
761 Iowa Avenue
Saginaw, Michigan

COMPLETE CATALOG INCLUDING REGRIND PRICES SENT ON REQUEST

▲ For more details circle NED-54 K3 on enclosed inquiry slip ▲

THE INSIDE STORY ON - - - POWER!

the ALL Way Balanced Dual-Vane DUDCO HYDRAULIC PUMP



Featuring starting torques higher than running torques, DUDCO has long been recognized as the most efficient Fluid Motor in the field. Standard models from 180 lb. in. to 14,400 lb. in.

One look at the inside of a DUDCO Pump tells the story of efficiency through *fully* balanced construction. Note how, at all times, the Dual-Vanes provide a *double* barrier to slippage and lost power. These DUDCO Vanes are individually balanced to closely follow the cam ring contour without wear-producing thrust . . . their unique displacement action provides an extra 15% to 20% added volume.

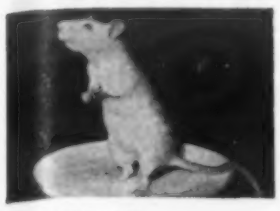
Smooth, non-pulsating DUDCO power, delivering 2000 psi for continuous operation, frequently doubles the capacity of less efficient hydraulic circuits. Standard models from 3 gpm to 120 gpm.

DUDCO DIVISION
THE NEW YORK AIR BRAKE COMPANY
1708 EAST NINE MILE ROAD • HAZEL PARK • MICH.

▲ For more details circle NED-57 K3 on enclosed inquiry slip ▲

FORMULA 602 VS. CARBON TETRACHLORIDE

(report by independent test laboratory)



FORMULA 602
Ten healthy adult albino rats inhaled 125 parts FORMULA 602 per million parts air in an inhalation box for 30 minutes. This was repeated daily for 14 days. At the end of this time ABSOLUTELY NO ILL EFFECTS OR DEATHS OCCURRED!

CARBON TETRACHLORIDE
After 30 minutes exposure to 125 parts carbon tet per million parts air in an inhalation box, seven out of ten rats died. The following day, the remaining 3 rats died after another 30 minutes exposure. CARBON TET KILLED ALL THE RATS!

FORMULA 602 CLEANS MOTORS AND ALL ELECTRICAL EQUIPMENT

FORMULA 602 cleans without leaving a residue, corroding metals or damaging electric insulation. Use it wherever carbon tet is used for cleaning!

SEND FOR FULL INFORMATION TODAY

the PENETONE co.

BOX ND-1053 TENAFLY, NEW JERSEY

For more details circle NED-58 K3 on enclosed inquiry slip

NEW RAMPE SCREEN SEPARATOR

BUILT FOR STANDARD 24" DIAMETER FOUNDRY RIDDLE OR 24" x 24" SQUARE SCREEN. LENGTH OF STROKE OF SCREEN MOVEMENT ADJUSTABLE FROM 0-1½" BY LOOSENING ONE BOLT.

The machine is operated by a ball bearing A. C. Motor through a novel design nylon eccentric bushing. Bronze bushings used throughout.

Dimensions 37" x 29" x 24" high.

Price (less tote box and screens) F.O.B. Cleveland, Ohio $179.50

Tote boxes and screens can be furnished, as desired. Specify screen mesh size.

Write for literature and complete information.

RAMPE MANUFACTURING CO.
3322 ST. CLAIR AVE., CLEVELAND 14, OHIO

For more details circle NED-59 K3 on enclosed inquiry slip

Easy to use . . . Easy to clean . . . Easy to service

DERBY SEALER

MODEL 32 GUMMED TAPE DISPENSER

For Shipping Room and Production Line Packaging

- Rugged simplicity aptly describes the Model 32. Derby's exclusive, one-piece solid casting eliminates parts and provides added rigidity. What's more, the Model 32 is easy to clean, even during the hot summer months when machines tend to "gum-up."
- The Derby Model 32 accommodates any tape from 1" to 3" wide. Delivers from 4 inches to 34 inches of tape at one stroke.
- Derby's exclusive "moisture-control" system maintains a maximum high water level in the tank to assure a constant supply of water to the brush, no matter how fast tape is dispensed.
- Also available is the Model 32-T with tool steel shear-type blades for cutting reinforced strapping tapes. Blades have two cutting edges to double their useful life before resharpening.

For further information, write Dept. NED

DERBY SEALERS, INC.
Derby, Connecticut

For more details circle NED-60 K3 on enclosed inquiry slip

INSPECTION FLASHLIGHT
has both beam and slide-out light

Dual lighting system built into this Duo-Flex industrial flashlight adapts it to wide range of applications. It has both a 1000-ft beam and a flexible slide-out cable with small bulb and plastic guard. When the side arm is extended, light is automatically transferred to the small bulb. Extension tube encased in the arm can be goosenecked around corners or into deep out-of-the-way spots. Plastic case has red "danger zone" lens ring and a three-way safety switch for steady light, flasher or signaling use. Made by **U. S. Electric Mfg. Corp.**, 226 W. Fourteenth St., New York 11, N. Y.

For more details circle NED-61 K3 on enclosed inquiry slip

COLUMN PRESS
four models are available

This column press is available in four styles with either 3 or 4-in. bore and in single or double actions, all of which alternatives are built into one basic adjustable stand. Double-acting cylinders have a maximum stroke of 4 in., with return stroke by internal spring. The mounting bracket permits both vertical and radial adjustment, and the table has an unhardened machined surface to permit mounting of special tooling. A bracket is available at extra cost for making rams nonrotating. Made by **Mead Specialties Co.**, Dept. CP-40, 4114 N. Knox Ave., Chicago 41, Ill.

For more details circle NED-62 K3 on enclosed inquiry slip

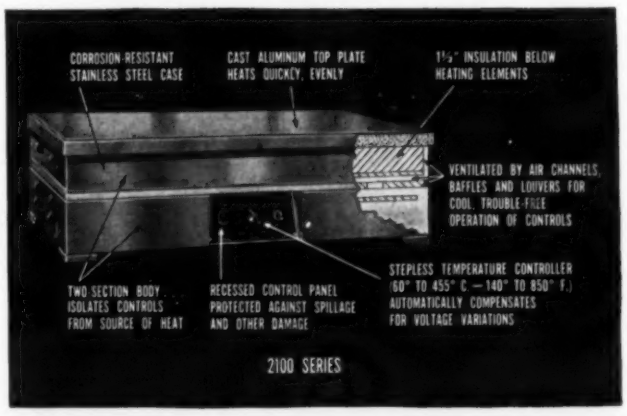
WET SANDBLAST UNIT
usable with any sandblast hose

Supplied with water from any convenient faucet or outlet, this Wet Jet venturi-action nozzle injects water into the abrasive stream to permit wet blast cleaning. Dusty conditions arising from the use of dry sandblasting are eliminated by this unit which is adaptable to any standard dry sandblast unit. Made by **Sanstorm Mfg. Co.**, 1801 Santa Clara St., Fresno, Calif.

For more details circle NED-63 K3 on enclosed inquiry slip

CLOSELY CONTROLLED HEATING

. . . with fast-heating, versatile TEMCO Hot Plates for boiling, evaporations, etc.



Here's the Hot Plate that processes your work precisely! Completely variable regulation of temperature between 60° and 455° C. (140° to 850° F.). Built-in controls hold temperature to extremely close limits, without variations due to line voltage changes. Economical to operate . . . current is "on" only half of the time to hold 260° C. (500° F.). Scientifically designed throughout to meet strict functional requirements. Two sizes: 12" × 12", 1300 Watts, and 12" × 24", 2600 Watts . . . both 7" high. $65 and $85. Write for literature and name of nearest dealer.

TEMCO® HOT PLATES

THERMO ELECTRIC MFG. CO., 484 HUFF ST., DUBUQUE, IA.

For more details circle NED-64 K3 on enclosed inquiry slip

hand pushed TROLLEYS

Webb Hand Pushed Trolleys are sturdily built for long life and minimum maintenance. Hardened steel wheels equipped with retainer type ball bearings assure long wearing properties and ease of operation. Triple labyrinth seals keep lubricant in and dirt out. Side guide rollers effectively eliminate binding and excessive wear, especially when moving loads around curves. For simple, inexpensive and easy handling of materials, use Webb Hand Pushed Trolleys.

P-2530
4" to 10" I-Beam; ½ Ton.

FOR BULLETIN AND PRICES WRITE TO:

JERVIS B. WEBB COMPANY

8921 ALPINE AVE. DETROIT 4, MICH.

OFFICES IN PRINCIPAL CITIES

CONVEYOR ENGINEERS AND MANUFACTURERS

For more details circle NED-65 K3 on enclosed inquiry slip

PORTABLE STRAPPING KIT

Brainard's new UTILIKIT is lightweight, portable and complete—contains all the equipment you need for steel-strapping cartons, bundles, packages, etc. Equipped with a 300-foot coil of strapping in cardboard dispenser, 1000 strapping seals and three basic tools: stretcher, sealer and snips. All materials packed in steel carrying case; economically priced. Can be used by anyone after a few minutes instruction.

Brainard — STEEL DIVISION SHARON STEEL CORPORATION

For booklet on UTILIKIT write
BRAINARD STEEL DIVISION
Griswold Street, Dept. HH-10
Warren, Ohio

For more details circle NED-66 K3 on enclosed inquiry slip

KEEP LOOSE LEAF RECORDS IN SMEAD BINDER COVERS

FOR PRICE SHEETS
PROFESSIONAL
PRESENTATIONS

Smead Pressboard Covers are a convenient method of binding your specifications, price lists, catalog sheets, reports, inventory sheets and all loose leaf papers. Prong fasteners in sturdy cloth bound flanges permit flexible capacity and orderly arrangement. Embossed panel on cover for printing or stamping. Made of Genuine Pressboard in 19 sizes--colors: red, black, gray, green and blue. Ask for Smead Covers at your stationer or write for ***free sample***.

SMEAD MFG. CO., INC. • HASTINGS, MINN.

Send me a free sample of your Pressboard Binder Cover.

NAME _____
TITLE _____ FIRM _____
ADDRESS _____
CITY _____ STATE _____

For more details circle NED-67 K3 on enclosed inquiry slip

BE FRESH . . . STAY FRESH

wear a **DUPOR Automatic Water-cooled Respirator**

For years a prime favorite of respirator users. Sponge filter saturated in water provides moist air—cool, comfortable breathing. Keeps out dust, fumes, smoke, paint spray. Face mask is of soft white rubber. Maximum visibility. Automatic valve exhausts breathed air instantly. Wear while paint spraying, or as protection against gases, dusts, smoke, fumes.

Sample sent $2.00 pp

H. S. COVER
South Bend, Ind.

For more details circle NED-68 K3 on enclosed inquiry slip

GET THIS GUIDE *to Standard or Special* NAYLOR FABRICATED FITTINGS

This handy Naylor Bulletin No. 525 offers helpful information on standard fittings for lightweight pipe and facts on special fabrications built accurately to your specifications. Sizes range from 3" to 44" in diameter and wall thicknesses up to ⅜". All types of materials. Write for your copy of No. 525 today.

NAYLOR PIPE COMPANY

1247 E. 92nd Street, Chicago 19, Illinois
New York Office: 350 Madison Ave., New York 17, N.Y.

For more details circle NED-69 K3 on enclosed inquiry slip

***with* PLASTIC ROCK!**

Trowel a smooth, tough, malleable surfacing right over your old concrete or wood floor.

Plastic Rock comes complete, packed in barrels; nothing more to buy; no "formula" to confuse. Simply mix and trowel over old floor; adheres to concrete, wood, steel; average depth ½"; perfect feather edge; hundreds of tons rolling on steel wheels only improve it. Spark-proof, skid-safe wet or dry; dustless, noiseless; cannot splinter, crumble, curl or loosen. Used by largest industries and railroads.

ASK FOR REPORT 220-N-10.

UNITED LABORATORIES, INC., 16804 Euclid Ave., Cleveland 12, Ohio

TESTED-APPROVED ULI UNITED LABORATORIES INC.
PRODUCTS AND PROCESSES for PROTECTING PROPERTY
Field Representatives All Over The World

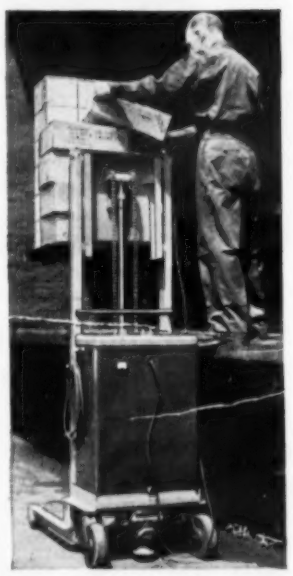
For more details circle NED-70 K3 on enclosed inquiry slip

STEREO MICROSCOPE
for small object inspection, assembly

Two sets of interchangeable paired objectives are furnished with the Edscorp stereo microscope to provide a power range from 15X to 60X. This imported instrument is highly practical for examination of small parts; for inspection of machined surfaces, welds, stampings, chamfers, angles, threads and holes; for detecting flaws and defects in manufactured parts; and for assembly of small components. Prism erecting system provides image that is right-side up and correct as to left and right. Eyepieces are furnished in 5X, 8X and 12X. Interpupillary distance is variable, and rack and pinion focusing is by means of focusing eyepiece. Instrument is adjustable for maximum height of 11 in. Distributed by **Edmund Scientific Corp.**, 180 E. Gloucester Pike, Barrington, N. J.

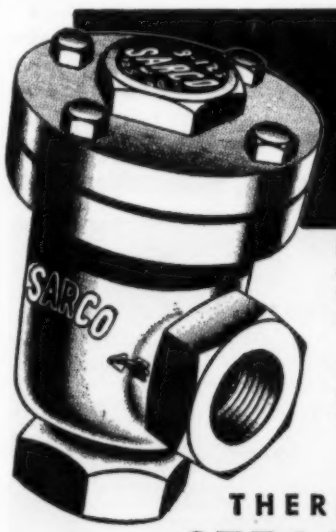
For more details circle NED-71 K3 on enclosed inquiry slip

BATTERY-OPERATED LIFT TRUCK
lifts 750 to 1000 lb 5 ft high



Two heavy duty batteries connected in series power this WorkLifter lift truck capable of lifting 750 to 1000 lb loads to height of five feet. Overall height is 6½ ft, with lift operating from 5¼ in. above floor to 5 ft. Base frame is 24 in. wide and 39 in. long, and its platform consists of 24-in. square steel plate with 17-in. high backplate. Battery charger, protected by circuit breaker, is built in and mounted on wall of battery compartment. Its cord plugs into any 110-v ac receptacle. Lifter moves on two 8-in. solid rubber swivel casters and two 5-in. solid rubber fixed wheels. It has foot-operated type floor lock. Hoist unit is electric-hydraulic gear-operated pump. Made by **Economy Engineering Co.**, 4511 W. Lake St., Chicago 24, Ill.

For more details circle NED-72 K3 on enclosed inquiry slip



FOR QUICK STARTS

In steam heated processes, output is increased if air is vented from the steam space.

The *rapid* removal of both large volumes of air and condensate are features of the

SARCO THERMOSTATIC STEAM TRAP

The powerful thermostatic bellows permits the use of an OVER-SIZE orifice and this orifice is **WIDE OPEN** when the trap is cold.

No seats to change . . . regardless of steam pressure changes. Only one operating part . . . the dependable, one-piece thermostatic bellows made of phosphor bronze, monel or stainless steel.

For removing air and condensate from dryers, kettles, pans, cookers, etc., use Sarco No. 9.
Write for Catalog 252. 505

SARCO SAVES STEAM
SARCO COMPANY, INC.
Empire State Bldg., New York 1, N.Y.
SARCO CANADA, LTD., TORONTO 5, ONTARIO

For more details circle NED-73 K3 on enclosed inquiry slip

Recommended

FOR LONG DEPENDABLE SERVICE

SEALMASTER BALL BEARING UNITS

- Pillow Blocks
- Take-Up Units
- Flange Units
- Cartridge Units
- Flange Cartridge Units

● **PERMANENTLY SEALED** SealMasters' patented centrifugal seal permanently seals out dirt—seals in lubricant—increases bearing life and reduces maintenance problems.

WRITE FOR CATALOG No. 845

Bearing Division
STEPHENS-ADAMSON MFG. CO.

Tellevel—Bin Level Controls · Car Loaders · Variable Speed Reducers · SealMaster Ball Bearings · Car Pullers · Winches · Saco Speed Reducers

12 RIDGEWAY AVE., AURORA, ILL.

For more details circle NED-74 K3 on enclosed inquiry slip

·NO MORE TINSEL ·NO MORE WIRES ·NO MORE IMPROVISATIONS

INSTALL NEW PATENTED

"MAGIC WAND"
SELF-ENERGIZING INDUCTION TYPE **STATIC NEUTRALIZERS**

WHICH USE STATIC ELECTRICITY GENERATED ON YOUR MACHINE AS THE NEUTRALIZING AGENT

No expensive high voltage bars, cables or transformers needed . . . No health hazards . . . Simple, amazingly effective . . . Inexpensive, no maintenance . . . No spark hazards, SAFE, does not shock operators nor damage stock.

The higher the charge, the faster the processing speed, the better this neutralizer works. Assures complete, not partial neutralization of static charges to safe levels.

WRITE FOR BULLETIN NO. 125

HERMAN H. STICHT CO., INC. 27 PARK PLACE, NEW YORK 7, N. Y.

For more details circle NED-75 K3 on enclosed inquiry slip

KENT

CUTS CLEANING COSTS

Special Large Capacity Vacuum for wet *and* dry pickup

- 3 TIMES FASTER than hand mopping. Converts easily for dry pickup.
- EXTRA POWERFUL VACUUM sucks dust, dirt from hardest-to-reach places.
- MOBILE UNIT with extra 27-gal. tank provides ample capacity for efficient, non-stop operation. Vacuum unit easily detachable for small area use.
- DOUBLE FANS produce high suction without excessive motor speeds assure long bearing life.
- AUTOMATIC SHUTOFF VALVE prevents overflow of liquid into fan motor.

WRITE NOW FOR FULL DETAILS!

THE KENT CO., INC.
449 Canal St.
Rome, N. Y.

For more details circle NED-76 K3 on enclosed inquiry slip

any speed you need

without special motors or installation

Motor mounts on top or end of unit—saves space, simplifies installation. Double reduction by V-belts and internal helical gears. Capacities to 60 HP.

SACO SPEED REDUCERS

Gives you the best speed for any job from practically any high speed motor. Quick, easy change of V-belt sheave gives any reduction ratio from 10 to 1 to 60 to 1. Quiet, efficient—steel helical gears cushioned in oil—ball bearings insure long life—even with heavy, overhung loads. Write for catalog 643.

MAIL COUPON FOR FULL DATA

STEPHENS-ADAMSON MFG. CO.
Standard Products Division
12 Ridgeway Ave., Aurora, Ill.
Please send me Bulletin 643 on S-A Speed Reducers
Name.....
Company.....
Address.....
City.....Zone...State.....

For more details circle NED-77 K3 on enclosed inquiry slip

BETTCHER MANUFACTURING CORPORATION . . .

says PHILLIPS degreasing
★ speeds up production
★ cuts overall production costs
★ gives more efficient cleaning

Phillips Model 84 degreaser gives fast, efficient cleaning in the Bettcher plant

PHILLIPS VAPOR DEGREASERS

- Higher operating temperature, greater capacity.
- No rinse, blast or drying operations.
- Power consumption only 70% in full production.
- Sizes, types for every need.
- Accurate, economical, safe solvent control.

Bettcher Manufacturing Corporation of Cleveland, Ohio has found that Phillips degreasing is vitally important in keeping costs low. Two Phillips batch type degreasers plus Phillsolv (stabilized and inhibited) are used to give fast, efficient cleaning of conversion heater parts. As a result, cleaning costs have been reduced 50% by this modern Phillips method. Parts are cleaner too, making possible further savings in finishing.

This is how the Phillips system helps get more profitable production. No matter what your own cleaning needs are, there is a Phillips unit to fit. Check with Phillips today for metal cleaning that cuts costs and improves cleaning at the same time.

SEND FOR THIS CATALOG

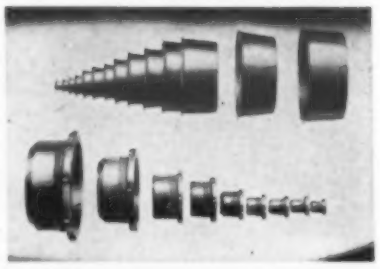
Complete information kit. Details on sizes, styles, installation. Illustrated bulletin and vapor degreasing handbook.

Phillips MANUFACTURING COMPANY
3463 Touhy Avenue • Chicago 45, Illinois
Engineered Metal Cleaning Equipment

For more details circle NED-78 K3 on enclosed inquiry slip

For more details circle NED-79 K3 on enclosed inquiry slip

TUBING CAPS
protect threads, ends, fittings



Flexible polyethylene plastic CaPlugs protect threads, tubing ends and fittings of all types of products and parts during processing, storage and transit. They are impervious to all common chemical reagents and will not chip, break or shred under severe conditions. They push on easily over pipe or tubing ends or insert in round openings as plugs. Series of threaded plugs is also available. Standard nonthreaded sizes fit diameters from 1/8 to 1½ in., with special sizes offered up to 3½ in. Stocked threaded plugs range from 5/16-in.-24 thread to 2½-in.-12 thread. Made by **Protective Closures Co.**, CaPlugs Div., Dept. N, 2209 Elmwood Ave., Buffalo 22, N. Y.

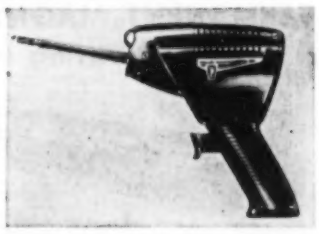
For more details circle NED-80 K3 on enclosed inquiry slip

CONVEYOR WHEELS
with double ball-bearing races

Having double courses of hardened steel ball bearings, 18 to the course, enclosed in hardened raceways, these conveyor wheels have a 5/8-in. carrying surface and 1⅞-in. OD. They fit on ¼-in. diameter shafts. Now available for use in original equipment or for replacement purposes, they are made by **Union Hardware Co.**, Dept. NED, Torrington, Conn.

For more details circle NED-81 K3 on enclosed inquiry slip

SOLDERING GUN
tips do not freeze in barrel



Preventing tips from freezing in the barrel due to oxidation and corrosion, design of model 250 Versa-Tool soldering gun also makes possible attainment of soldering temperatures in less than 4 seconds. Unit is rated at 250 w, 115-v ac, and is also made for 200-v ac operation. Other features include reinforced plastic housing; one-piece molded phenolic trigger pivot assembly; a barrel assembly which can be removed without disassembling housing; and a handy fuse-cap location. Made by **Phillips Mfg. Co.**, Dept. KP-1, 2816 Aldrich Ave. S., Minneapolis 8, Minn.

For more details circle NED-82 K3 on enclosed inquiry slip

New "PULL-GEAR" SPEED-REDUCING PULLEY
Increases Drill Press Capacity

NEW MODEL

Provides Correct Speed and Power to Drill Up to 1⅜" with ½ H.P. Motor

Amazing new internally geared speed reducer doubles drill press capacity. Greater power, greater efficiency, greater productivity.

Provides the correct speed and power for larger drilling, reaming, tapping and boring on light presses. Easily installed in five minutes. Adaptable to all type machines. Spindle speed range approx. 45 to 3000 RPM. Made in 3 motor shaft sizes: ½" - ⅝" - ¾". Write for literature.

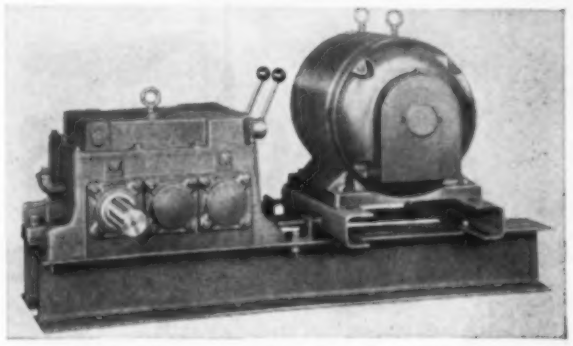
Some Territories Open to Jobbers

THE PULL-GEAR CO.
4118 E. 8-Mile Rd., Detroit 34, Mich.
WRITE FOR LITERATURE

For more details circle NED-83 K3 on enclosed inquiry slip

TURNER
4-SPEED Transmission
from fractional HP through 60 HP

TURNER MOTOR ▼



Here is the answer to many power transmission problems. A four speed transmission in sizes from fractional HP through 60 HP. For use with any speed electric motor or engine. Available in a wide range of speed ratios including certain six and nine speed transmissions.

WRITE US TODAY — OUTLINE THE DESIRED OUTPUT SPEEDS, SIZE AND SPEED OF MOTOR OR ENGINE, A BRIEF DESCRIPTION OF YOUR PROBLEM AND WE WILL FORWARD COMPLETE DETAILS.

TURNER UNI-DRIVE CO.
3485 Terrace Street Kansas City 8, Mo.

For more details circle NED-84 K3 on enclosed inquiry slip

RECEIVING...PRODUCTION... WAREHOUSE...SHIPPING... MAINTENANCE

every department can use the CM CYCLONE HIGH-SPEED—HEAVY DUTY—ALUMINUM ALLOY CHAIN HOIST

CAPACITIES: ¼ TO 10 TON

● Help your men get lifting jobs done quicker, safer, with less physical effort. Increase labor dollar return. PORTABLE—Carry with one hand. EASY OPERATION—Less hand chain pull. LOW HEADROOM—Highest possible lift. HERC-ALLOY flexible welded load chain. Lifetime lubrication. *More CYCLONE Hoists are in use today than any other hoist in their class.*

CYCLONE CATALOG NO. 145
Illustrates, describes and prices all models. Sent on request or ask your CM Distributor.

CM HOISTS AND CHAIN
CHISHOLM-MOORE HOIST DIVISION
COLUMBUS McKINNON CHAIN CORPORATION
TONAWANDA, NEW YORK
DISTRICT OFFICES: NEW YORK, CHICAGO, CLEVELAND
In Canada: McKINNON COLUMBUS CHAIN LIMITED, ST. CATHARINES, ONT.

For more details circle NED-85 K3 on enclosed inquiry slip

AN INDISPENSABLE FIRST-AID INSTRUMENT

G-S EYE SWEEP
Double Purpose
MAGNET AND LOOP

For removing metallic particles, dirt, chips, any foreign matter from the eye. $2.50

Magnetic tip easily picks up the smallest piece of iron or steel. Flexible loop is very convenient for removing cinders, dirt and non-magnetic particles.

Sterilization will not affect magnetic properties or loop. A hard rubber carrying case is provided with each G-S Eye Sweep.

ORDER TODAY DIRECT OR SEND FOR COMPLETE DATA

A DEPENDABLE GUIDE TO SAFETY
GENERAL SCIENTIFIC EQUIPMENT COMPANY
TESTED INDUSTRIAL SAFETY PRODUCTS

2701 W. Huntington St., Philadelphia 32, Pa.
RESPIRATORS • PUMPS • GOGGLES • SHIELDS • GLOVES • APRONS • HELMETS

For more details circle NED-86 K3 on enclosed inquiry slip

CHICAGO TRAMRAIL

JIB CRANES

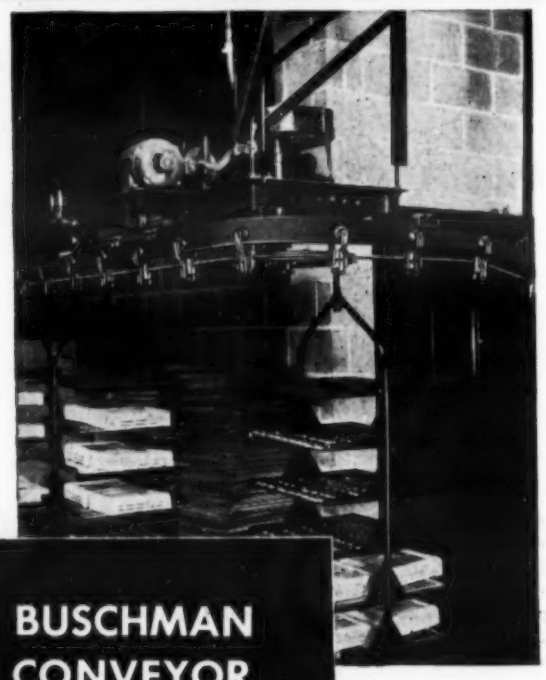
FASTER HANDLING
at less cost

- 360° Swing • Self-Supporting
- Capacities from ½ ton to 5 tons
- Complete Line of Pillar, Mast and Wall Type Jib Cranes

Write for Catalog

CHICAGO TRAMRAIL CORPORATION
4000 West Washington Boulevard • Chicago 24, Illinois
OVER HEAD CRANES • STAK-RAK CRANES
MONORAIL SYSTEMS AND RACKS

▲ For more details circle **NED-87 K3** on enclosed inquiry slip ▲



BUSCHMAN CONVEYOR strikes new note IN PRODUCTION at NuTone, Inc.

continuous handling of 50,000 parts daily!

This manufacturer's production suffered from aisles jammed with parts trucks, excessive manual handling, wasted space. A large inventory was required.

Now, Buschman "Universal" Overhead Trolley Cable Conveyor provides live storage space overhead, cuts parts handling to a minimum and significantly reduces inventory in process.

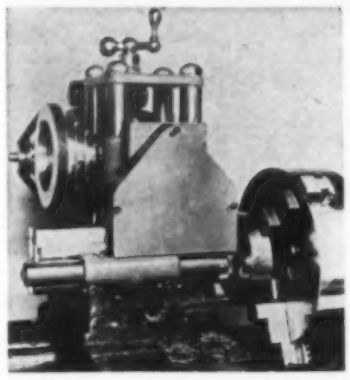
Using Buschman Cable Conveyor stock parts, you, like Nutone, can get a "custom installation" quickly and at low cost. Let Buschman suggest a time, money and space saving solution for your handling problem. Write today for details.

THE E. W. BUSCHMAN CO.
Spring Grove at Winton Place
Cincinnati 32, Ohio
Canadian Licensee:
James A. McKechnie, Ltd.
Toronto 13, Canada

PRODUCE MORE ... FOR LESS on Buschman Conveyors

▲ For more details circle **NED-88 K3** on enclosed inquiry slip ▲

INTERNAL KEYSEATER
also acts as slotter and shaper



Internal keyways from ⅛ to 1 in. wide in bores as small as ½-in. diameter can be cut to any required size by the Versa-Mil internal keyseater, slotter and shaper. The reciprocating portable independent tool can be taken to the work, and can be set on a lathe carriage for cutting a keyway in the same setup that bores a hub. Use can also be as a portable slotter or shaper, and as a bench shaper. Stroke is adjustable from 0 to 5 in. and a full 360 degrees in angle. Cuts are controlled in width to tolerances within 0.001-in. Made by **Versa-Mil Co.**, Dept. 54, 33 W. 42nd St., New York 36, N. Y.

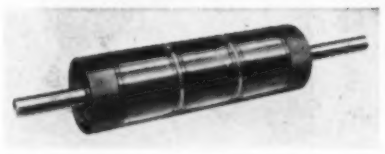
▲ For more details circle **NED-89 K3** on enclosed inquiry slip ▲

PORTABLE ELECTRIC SAW
saber type cuts various materials

Saber type portable electric Lesto hand saw is designed, with a change of blades, to cut soft and hard woods, plywood, metal, Formica, Transite, insulation and other materials in any form or shape. Features include good balance, visible cutting lines and rapid blade speed. Two models are available, each with 25-60-cycle, 110-v ac-dc motor. Model 2 cuts up to ¾-in. thick materials, and model 11 has maximum sawing thickness of 2 in. Available from **American Floor Surfacing Machine Co.**, 598 S. St. Clair St., Toledo 3, O.

▲ For more details circle **NED-90 K3** on enclosed inquiry slip ▲

PERMANENT MAGNET PULLEY
for separating or sheet feeding use



Reported to test as strong as units twice its size, this 4-in. diameter permanent magnet pulley uses a peripheral magnetic field. It is especially suited for magnetic separator functions on conveying systems where belt thicknesses are ⅛-in. or less and speeds do not exceed 30 rpm. It is also usable as sheet steel feeder or controlling roll. Having nonmagnetic stainless steel shaft, pulley is offered for 4 to 24-in. belt widths. Made by **Eriez Mfg. Co.**, 1325 E. Twelfth St., Erie, Pa.

▲ For more details circle **NED-91 K3** on enclosed inquiry slip ▲

If You Use ... or Can Use
MOULDED OR FABRICATED
RUBBER
In Any Shape or Form

BUMPERS—BUSHINGS
CORKS—GROMMETS
SHEET—SLAB—SPRING
VACUUM CUPS—GASKETS
CYLINDER—WASHERS
SHEET—TUBING
EXTRUSIONS
LARGEST STOCK OF SPONGE IN U.S.A.

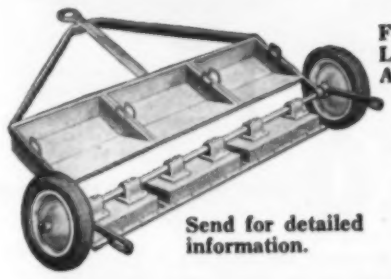
3 decades of experience plus unexcelled laboratory and engineering service is at your command.

ATLANTIC's new comprehensive catalog is now available. Write for your copy today. No obligation.

ATLANTIC INDIA RUBBER WORKS, INC.
571 West Polk Street • Chicago 7, Illinois • HArrison 7-8290

▲ For more details circle **NED-92 K3** on enclosed inquiry slip ▲

HOMER PERMANENT non-electric MAGNETIC ROAD SWEEPERS SAVE TIRES and REPAIRS



For use on Highways Landing Strips, Dock Areas, Etc.

Roads

Send for detailed information.

Watch your expense drop—Watch your profit grow, by reducing time consuming and expensive tire repairs to a minimum. Keep your loading areas and roads free from nails and other steel trash with HOMER MAGNETIC ROAD SWEEPERS.

The HOMER MANUFACTURING CO., Inc.
DEPT. 1-25 LIMA, OHIO

Producers of Magnetic Separator Equipment Since 1923

▲ For more details circle **NED-93 K3** on enclosed inquiry slip ▲

CUTTERS
that give you more clean cuts per dollar

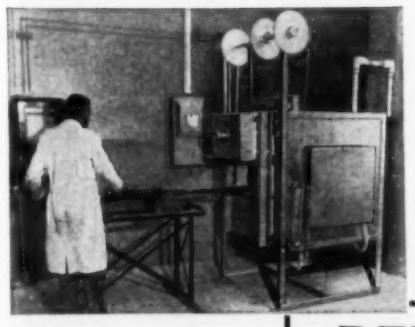
Every cutter in the broad Brown & Sharpe line is carefully designed and manufactured to lower your *real* cutter cost . . . give you more smooth, clean cuts per dollar invested. Complete selection of types and sizes to improve milling efficiency on any job. Write for illustrated Catalog. Brown & Sharpe Mfg. Co., Providence 1, R. I., U. S. A.

BUY THROUGH YOUR LOCAL DISTRIBUTOR

B&S Brown & Sharpe

▲ For more details circle **NED-94 K3** on enclosed inquiry slip ▲

Even High Speed Steels—



handled with this *Full-Range* general-purpose heat-treating furnace Model FG-430

PERECO *Electric* FURNACE

PERENY EQUIPMENT COLUMBUS OHIO

A Pereco Furnace cuts costs in many ways! Saves time—cuts man hours—reduces spoilage—saves on maintenance—insures better results! Why? Because clean electric heat is put under accurate, versatile control—with unmatched specialized equipment design—in a Pereco Furnace. Get the details and compare.

Highlights
Chamber Size: 14" w. x 24" d. x 12" h.
Overall Size: 50" w. x 52" d. x 84" h.
Counterbalanced Door: Wedge-fit—air operated.
Heating Elements: Silicon Carbide—over and under.
Temperature: 2500° F. (Higher for short runs)
Controls: Furnished in separate panel-mount.
Connected Load: 45 KVA—220/60/3.

Write Today

PERENY EQUIPMENT CO.
Dept. G, 893 Chambers Rd., Columbus 12, Ohio
Standard and Special Units 450° F. to 5000° F.

▲ For more details circle **NED-95 K3** on enclosed inquiry slip ▲

SAVE UP TO 85%

WAR SURPLUS SAVINGS

NEW INSIDE – OUTSIDE VERNIER CALIPERS
German made by one of Europe's leading specialists in precision tools. Measures inside-outside & depth in .001" to 6" in 1000ths and 1/10mm to 150mm in 10ths. 9.75
MICROMETERS – 0" to 1" in 1,000ths. Has lock-nut & ratchet ...ONLY – ... 9.75

STAND MAGNIFIER
Handy stand magnifier with universal adjustments. Overall height 6". Has powerful, clear magnifying lens. 1.49

BENDIX HYDRAULIC PUMP & MOTOR
Has 3-1/2 GPM capacity at 600 PSI. Motor is 1½ HP, 24V, D.C. Will operate on either 12 or 32V, DC current. Has built-in relief valve adj. to 1500 PSI. This unit ideal for hyd. lifts, portable loaders, etc. 19.50

MAGNETIC BASE-INDICATOR HOLDER...
A time saver for precision checking. Magnetic base fits curved or flat surfaces. Has 45-50 lb. pull. Stainless steel 6½" rod mounted in ball socket permits universal settings .. 3.95
Note: We have complete line of instruments, depth gauges, inspection mirrors, etc. WRITE TODAY

HYDRAULIC HAND PUMP
Operating pressure 2000 PSI. Cap., 1.5 cu. in per complete cycle ... 12.75

GEAR HEAD MOTORS
Heavy duty, G.E. Gear Head motor. 2 HP, 24V. DC, 125 amp., reversible motor drives a reduction gear unit giving 36 to 1 ratio at take-off. Also will operate on 6 or 12 volts.
36 to 1 G.E. (306 shaft RPM)
28 to 1 Eclipse (130 shaft RPM)
40 to 1 Eclipse (110 shaft RPM) 10.95 EA.

HYDRAULIC ACCUMULATORS
A-28 FLOATING PISTON TYPE – 4"x 18" Built to stand 2,000 PSI 12.75
A-5 VICKERS – 10" dia. Ball type. Built to stand 2000 P.S.I. 24.75

ELECTRIC ACTUATORS
Hundreds of uses for any mechanical device needing controlled 2 way action. Opens, closes, raises or lowers doors – windows – gates – valves. CTU-2 – Foote Linear Actuator – 24 volt, DC, 8500 RPM, 1/6 HP – series wound motor. 4½" stroke in 13½ sec. Compression and tension loads up to 750 lbs. Adjustable micro switch for limits of travel. Overall lngth., retracted 11" 7.95
We also carry many more sizes and types of Actuators. Write today for information.

HYDRAULIC CYLINDERS
Gives 20,000 lbs. thrust (push or pull) using 1500 PSI line pressure as obtained from our hydraulic pumps. Will produce up to 40,000 lbs. thrust with 3000 PSI. Can also be used on low pressure air systems. 4" bore; 18" stroke; 30½" length. Ideal for road form – shop machinery. 29.75

No. 5 HYDRAULIC CYLINDER
Double action. Bore is 1" – Shaft ½". Has stroke of 2½" to 4". Stroke can be adjusted with internal sleeve stops. Overall length is 8½". Will take 1500 lbs. continuous duty. 3000 lbs. intermittent. Will lift or push up to 1100 lbs. 5.75
We stock over 30,000 Hydraulic Cylinders, Valves, Pumps, Accumulators, Hand Pumps, Motors, Hose, etc. All at Money Saving Prices.

230 Pg. CATALOG
Amazing Values! 1000's of items for Mfgr., Mechanic, Sportsman, etc. Save on Machine Tools, Hydraulics, Pumps, Valves, Hand & Power Tools, Instruments, etc. Send for your copy today!

PALLEY SUPPLY CO.
2263 E. VERNON AVE. Dept. NED-10 LOS ANGELES 58, CALIF.
Order from this ad. Pay by M.O. or check. P.O's accepted from D&B firms. ½ deposit with C.O.D's. All Prices F.O.B. Los Angeles

For more details circle NED-96 K3 on enclosed inquiry slip

PAGE FENCE - Since 1883

• AMERICA'S FIRST WIRE FENCE •

EVERY STEP IS QUALITY CONTROLLED—FROM RAW METAL TO THE ERECTED FENCE

• Page *Chain Link* Fence, pioneered by PAGE and produced only by PAGE, offers reliable protection against hazards which threaten both property and persons.

YOUR CHOICE OF THREE SUPERIOR METALS is assurance that your fence will best meet your needs. Choose heavily-galvanized Copper Bearing Steel, or long-lasting Stainless Steel, or corrosion-resisting Aluminum. Interlocking wires are woven to form a strong, uniformly square mesh.

EIGHT BASIC STYLES, varied by choice of metals, wire gauges, heights, types of gates, posts and post tops, and top rails. Tension and fabric bands not removable from outside. Gate frames welded at joints.

IT'S TIME TO THINK, AND ACT. Page Fence is expertly erected by technically trained firms conveniently located throughout the country. For illustrated PAGE data and name of nearest firm . . .

Write to PAGE FENCE ASSOCIATION in Monessen, Pa., Atlanta, Bridgeport, Chicago, Denver, Detroit, Los Angeles, Philadelphia, New York or San Francisco.

PRODUCT OF PAGE STEEL & WIRE DIVISION OF AMERICAN CHAIN & CABLE COMPANY, INC.

For more details circle NED-97 K3 on enclosed inquiry slip

Small precision metal parts... Torrington makes them better, and for less!

FREE CATALOG — shows the great variety of small parts we can produce inexpensively and promptly. Send for copy today!

If your product uses small precision metal parts . . . pivots, pins, dowels, rollers, mandrels, needles, punches, etc. . . . send us your blueprints for a prompt quotation.

As a leading contract fabricator, TORRINGTON is equipped with the special machinery to produce in any quantity for quick delivery at low prices.

THE TORRINGTON COMPANY
Specialties Division
420 Field Street • Torrington, Conn.

Makers of
TORRINGTON NEEDLE BEARINGS

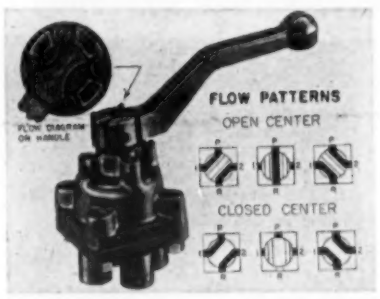
For more details circle NED-98 K3 on enclosed inquiry slip

ELECTRIC DUPLICATOR
reproduces two copies per second

Called the model D-11 Ditto machine, this unit reproduces at the rate of two copies per second anything typed, written or printed through duplicating carbon in as many as five colors in one operation. Copies can be made on any weight paper from No. 16 to heavy card stock and in sizes up to 8½ x 14 in. Unit is automatic and electrically powered and is popularly priced. It has a high quality power drive and uses the same power clutch as Ditto's higher priced machines. Hand feed can be used if desired with a tripping operating handle. Other features include retractable receiving tray, reversible feed tray, rapid paper size adjustment and corrosion-resistant construction. Made by **Ditto, Inc.,** 2302 W. Harrison St., Chicago 12, Ill.

For more details circle NED-99 K3 on enclosed inquiry slip

HYDRAULIC VALVES
manual type, for 1500 psi service



For 1500 psi oil service and available in pipe sizes from ¼ to 1 in., Shear-Seal manual hydraulic valves feature leakproof closure, low handle load and good throttling. They are also resistant to freeze-ups and are not critically affected by dirt in the line. Standard models can be bracket or panel mounted, and the straight porting of the four-way series provides for manifolding with standard tees in the pressure and return ports. Position stops and detents are fully enclosed, and a flow diagram on the handle indicates the flow for all operating positions. Spring centering and a positive locking device are standard accessories. Made by **Barksdale Valves,** Dept. NED, 5125 Alcoa Ave., Los Angeles 58, Calif.

For more details circle NED-100 K3 on enclosed inquiry slip

DO YOU KNOW? Airplane fuel cells are held in place with new snap-type fastener that does not pierce cell wall. It consists of stud subassembly that attaches to outer wall of cell, an aluminum washer which serves as a bearing surface, and housing subassembly which is riveted or screwed to any surface or structural member. Made by Waldes Kohinoor, Inc., Dept. 057, 47-16 Austel Pl., Long Island City 1, N. Y.

For more details circle NED-101 K3 on enclosed inquiry slip

Get More Attention... WITH DAV-SON INDUSTRIAL BULLETIN BOARDS

QUICK CHANGE LETTER BOARDS for any message *you want, when you* want it. Get quick acceptance of plant programs, drives, safety news, etc. Flash BIG, Bold Headlines on durable, economical changeable letter boards. Many sizes, styles available.

Genuine Cork-Back boards with amazing self-sealing cork for quick posting of letters, photos, posters, etc. Walnut finish hardwood frame, mitered and glued, or sturdy metal frames. Available with or without locking glass doors. Wide variety of sizes.

REMEMBER . . . A Dav-Son Board for every purpose—in plant, office, warehouse.

WORLD'S LARGEST SELECTION. 100 DIFFERENT SIZES AND STYLES TO CHOOSE FROM

Changeable Letter
Genuine Cork-Back
Indoor and Outdoor
Metal or Hardwood Frames
Special Safety Displays
With or Without Locking Glass Doors
Illuminated and Non-Illuminated
Single and Multiple Panels

Write for Complete Information Regarding Your Requirements. If Your Dealer Cannot Supply—Order Direct

A. C. DAVENPORT & SON, INC.
DEPT. NE.
311 N. DESPLAINES ST. • CHICAGO 6, ILL.

INSIST ON DAV-SON—YOUR BEST BUY!

For more details circle NED-102 K3 on enclosed inquiry slip

ZIP OFF SCALE RUST PAINT with AURAND CLEANING TOOLS

Get the time and money-saving facts

AURAND rotary chipping action quickly, easily, thoroughly removes scale, paint, rust, and other accumulation from any hard surface. Renewable cutter heads and fool-proof cutting depth adjustment allow the unskilled operator to produce perfectly clean surfaces. Available in electric or pneumatic models. Write today for further information on cleaning your iron, steel, brick, concrete, and other hard surfaces.

WRITE TODAY TO DEPT. 14

AURAND MFG. & EQUIP. CO.
2643 Colerain Avenue • CINCINNATI, OHIO

For more details circle NED-103 K3 on enclosed inquiry slip

Act now—have a money-saving B.F.Goodrich TW TIRE AND WHEEL ANALYSIS made in your plant today!

• You can save as much as 50% on industrial tire costs with the B. F. Goodrich Tire and Wheel Analysis Plan!

Call in your local B. F. Goodrich representative today. He's trained to study your materials handling set-up. He knows the kind of industrial tires—the tread compounds and tread designs—that will give the best service at lowest cost in your type of work. He'll recommend these tires to you. And this service costs you nothing, puts you under no obligation.

Industrial tire users across the country have benefited from the recommendations of the B. F. Goodrich Tire and Wheel Analysis man. They have saved up to 20% on *maintenance costs alone* by following the suggestions he makes. Why not find out, without obligation, how much the B. F. Goodrich Tire and Wheel Analysis Plan can save *you!*

You can be sure the advice you get from your BFG man will be impartial. He has no axe to grind for any particular type of industrial tire—for B. F. Goodrich makes, and BFG retailers sell, a complete line of industrial tires.

Call your local B. F. Goodrich representative today and ask him to make a free Tire and Wheel Analysis in your plant, or mail the coupon. A special TW Analysis Plan is available for manufacturers of industrial handling equipment.

Specify B. F. Goodrich tires when ordering new equipment

The B. F. Goodrich Co.
Department TW-253, Akron 18, Ohio.
Please send me:
☐ *Additional information* on your new Tire and Wheel Analysis Plan
☐ A free copy of your "Industrial Tire Guidebook".
Name _____
Company _____
City _____ Zone ____ State ____

B.F.Goodrich RESEARCH KEEPS FIRST IN RUBBER

For more details circle NED-104 K3 on enclosed inquiry slip

Why Shipping Labels?

PRINT DIRECT

Speeds Up Freight Marking

Eliminate the cost and time of pasting on labels. Print direct .. 1000 or more clear, sharp copies without re-inking. Prints practically anywhere .. postcards, tags, labels, boxes, cartons, packages, menus, forms, letters .. paper, cloth, wood. Just type, write, trace or draw on inexpensive stencil .. snap it on duplicator .. and print—like using a rubberstamp. New pre-die-cut "FORM-CUT" stencil prints shipping form and identification data in one operation.

THE ORIGINAL HAND STAMP STENCIL DUPLICATOR

Portable . . non-mechanical . . of non-corrosive metal . . replaceable ink pads. 8 complete outfits: $9.50 to $99.50, including supplies (f.o.b. factory). Write for literature or see your office or shipping room supply dealer.

OVER 30 YEARS **MULTISTAMP** STENCIL DUPLICATOR ®

MANUFACTURED ONLY BY THE MULTISTAMP CO. NORFOLK, VIRGINIA

For more details circle **NED-114 K3** on enclosed inquiry slip

Get absolutely

OIL-FREE AIR

with **GAST** rotary

OIL-LESS AIR PUMPS

Below — Oil-less 3040, end plate removed. From 17 to 24 C.F.M.

Oil-less Model 1550 — 8 to 10.5 C.F.M.

See our CATALOG in SWEET'S FILE for PRODUCT DESIGNERS

Write for new Data Sheet on Oil-less Pumps, showing three types and rating tables.

THEY RUN ENTIRELY *without oil* in pumping chamber. Carbon rotor vanes lubricate themselves—through thousands of hours' use. Ball bearings grease-sealed for life. You can forget oiling problems!

DELIVERS ABSOLUTELY OIL-FREE AIR. Your product or material can't be contaminated with oil droplets.

FOR BOTH VACUUM AND PRESSURE, Gast Oil-less Models are precision-built for dependable high performance. Sizes from 3.5 to 24 C.F.M., 3 to 10 lbs. pressure, 10 to 20 in. vacuum.

Original Equipment Manufacturers for Over 25 Years

GAST ROTARY — AIR MOTORS (TO THREE H.P.) · COMPRESSORS (TO 30 LBS.) · VACUUM PUMPS (TO 28 INCHES)

GAST MANUFACTURING CORP., 115 Hinkley St., Benton Harbor, Mich.

For more details circle **NED-115 K3** on enclosed inquiry slip

ACROMARK MEANS "ACCURATE MARKING"

FILL DESIGN AND LETTERING WITH ENAMEL MECHANICALLY

ASK FOR— THE **ACROPRINTER** Reg. U. S. Pat. Off.

MADE IN SEVERAL SIZES

MANUALLY OR POWER OPERATED

CONSTANTLY IMPROVED

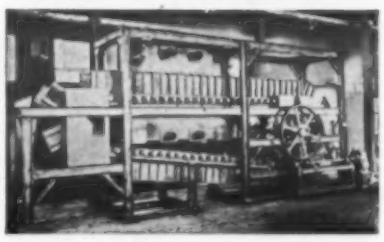
The ACROMARK Company

WRITE TO—7-11 MORRELL ST., ELIZABETH 4, N. J.

"THE ORIGINAL MARKING SPECIALISTS"

For more details circle **NED-116 K3** on enclosed inquiry slip

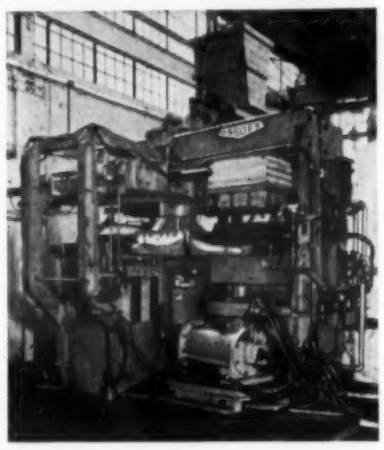
SINTERING MACHINES for pilot applications



Dwight-Lloyd line of sintering machines for research and pilot work has features of larger production machines and is capable of operation by down draft, up draft or in combination. Gases can be recirculated by pressure or suction for full heat recuperation or gas enrichment. Unit illustrated has hearth area of 2 x 9 ft and movable dividers in lower and upper windboxes to provide four compartments in each. Machines can sinter fines, dry or calcine materials, and heat treat pellets, whether by simple baking, incipient sintering or full sintering. Pilot machines are made in a size range from 1 ft wide by 4 ft long to 3 ft wide by 30 ft long. Made by **Sintering Machinery Corp.,** 416 Sinter Ave., Netcong, N. J.

For more details circle **NED-117 K3** on enclosed inquiry slip

AUTOMATIC MOLDER performs all functions in mold making without manual operation



Rotary automatic molding machine, designed to make sand molds in which various types of castings are produced, is capable of producing cylinder block half-molds at rate of 240 per hour, and shallower molds at rates up to 300 halves per hour. Molds are made to close dimensional tolerances on the four-station machine. All operations, including molding, handling, sand filling and ramming, jolting and squeezing and drawing are performed automatically.

Operations at stations 2, 3 and 4 are performed simultaneously and are automatically controlled through drum switch which actuates solenoid valves controlling each of the operations. Interlocking limit switches at all necessary points insure safety in operation of the equipment. Under normal conditions, no manual operations are needed in making the mold. Machine weighs 80,000 lb and consumes about 120,000 lb of sand hourly in making cylinder block molds. Made by **Osborn Mfg. Co.,** 5403 Hamilton Ave., Cleveland 14, O.

For more details circle **NED-118 K3** on enclosed inquiry slip

Facts!

You Should Know About

PITCHLIGN Trade-Mark

ROLLER BEARINGS

1. Controlled rollers.
2. Pitch circle alignment.
3. Cage is supported by the broad, integral flanges.

Cage contact with the rollers is at their extreme length *and* at the pitch circle. Rollers, in turn, are held in axial alignment by the integral flanges of the outer row. Get the facts!

Write Today!

Ask for Bulletin SF-966

RBC ROLLER BEARING COMPANY OF AMERICA

SULLIVAN WAY · WEST TRENTON, N.J.

For more details circle **NED-119 K3** on enclosed inquiry slip

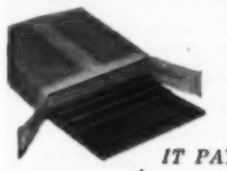
ISOMODE* PADS...

money-saving "shoes" for busy machine feet!

Now you can successfully isolate vibration, muffle plant noise, and cut down maintenance bills by using low-cost Isomode Pads.

Made of DuPont Neoprene, these pads resist oil and water, actually last for years. In thousands of installations, they have already proved their ability to swallow up troublesome machine shock and vibration. Even that of giant punch presses.

Installation is quick, easy. And there's no waste — you use only as much as you need. Simply cut an Isomode Pad to size and install under equipment. Results: Machines stay put without bolting, floors and building remain undamaged, working conditions are improved, and machine maintenance is cut.



Try a package of Isomode Pads and see. Write for full details and price list. **Trade Mark*

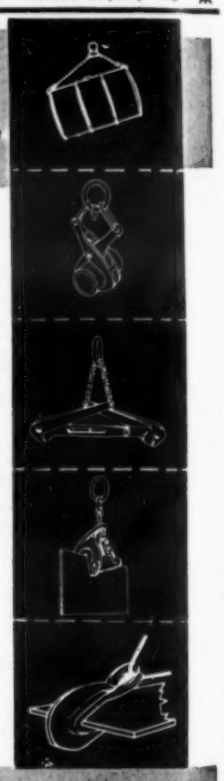
IT PAYS TO KEEP A PACKAGE ON HAND

THE **MB** MANUFACTURING COMPANY, INC.

1066 State Street, New Haven 11, Conn.

For more details circle **NED-120 K3** on enclosed inquiry slip

PICK 'EM UP *Faster..Easier*



DOWNS **SAFETY** GRABS ...GRIP ANYTHING!

Yes we said anything—odd shapes, round, oblong, square or even loose objects such as bags or bundles. Best of all you save money on your handling problems while protecting employees.

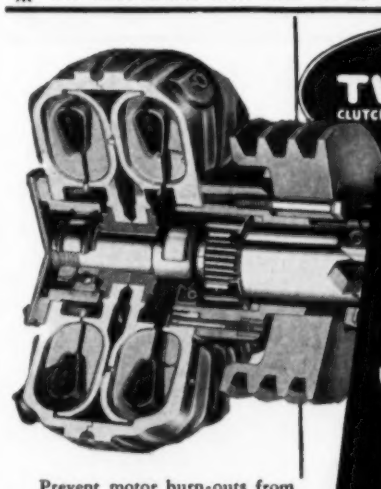
Downs Safety Grabs are engineered to provide a load safety factor greater than rated capacity plus a Bulldog grip that won't let go until you release the load. There's a Downs hook, grip, tong or sling to fit every handling problem. Write for free illustrated catalog 200 today!

DOWNS CRANE & HOIST CO.

MECHANICAL ENGINEERS

540 W. VERNON AVENUE • LOS ANGELES 37, CALIF.

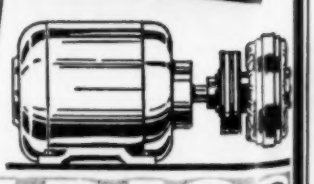
For more details circle **NED-121 K3** on enclosed inquiry slip



TWIN DISC CLUTCHES AND HYDRAULIC DRIVES REG. U. S. PAT. OFF.

HYDRO-SHEAVE® Drives

Prevent motor burn-outs from heavy starting loads, by slipping Twin Disc HYDRO-SHEAVE Drives on the end of your motor shafts. Twin Disc Double-Circuit design fluid coupling cushions overloads; permits motor to accelerate to efficient speed and pick up loads smoothly. For motors (and engines) from ¼ to 50 hp. Write for name of nearest Authorized Hydraulic Dealer.



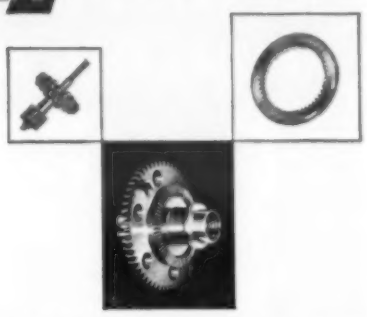
TWIN DISC

TWIN DISC CLUTCH COMPANY, Racine, Wisconsin • HYDRAULIC DIVISION, Rockford, Illinois

BRANCHES: CLEVELAND • DALLAS • DETROIT • LOS ANGELES • NEWARK • NEW ORLEANS • SEATTLE • TORONTO

For more details circle **NED-122 K3** on enclosed inquiry slip

RYNEL PRECISION GEARS



DESIGNERS AND SUPPLIERS
Electronic
Instrument
Communication
Navigation
Power Tool
and
Appliance

FINE PITCH GEARS
MEMBER

Match Performance With Custom Service

Rynel precision gear performance in fine pitch motion applications is matched only by its custom executive-type air service.

You can leave your plant, inspect Rynel facilities, check precision specifications, consult on design problems, and return to your office —all in the same day, as a result of Rynel's new concept of customer service and supply.

Be sure of dependable service on your fine-pitch quality gear requirements. Send prints to Rynel engineers for estimates or design suggestions.

SEND FOR YOUR COPY
New Concepts In Fine Pitch Gear Supply.

RYNEL Corporation

Phone Sterling 4440 • Chicago LOngbeach 1-7111
302 Miller Street, Sterling, Illinois • 4730 N. Western Avenue, Chicago, Illinois

SPUR · HELICAL · WORM · WORM GEAR · INTERNAL · SEGMENT · RATCHET · STRAIGHT BEVEL GEARS

▲ For more details circle **NED-123 K3** on enclosed inquiry slip ▲

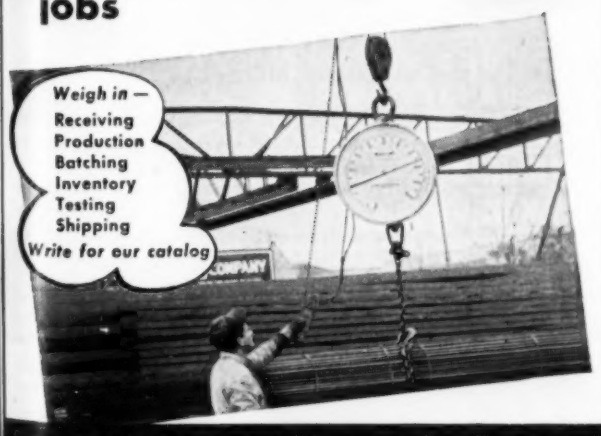
How much do you weigh?

Not you, but your products! Do you weigh in receiving, at production stages, etc. to protect your operation against overcharges, losses, miscalculations? HYDROSCALE, the hydraulic crane scale, makes it practical to check whenever and wherever you should, weighs on the spot, eliminates weighing stations and man power and equipment tie-ups.

36 MODELS, 500 to 200,000 LBS.

HYDROSCALE

reduces the effort and expense associated with routine weighing jobs



HYDROWAY SCALES, INC.
20614 W. 8 Mile Rd., P.O. Box 4754, Detroit 19, Mich.

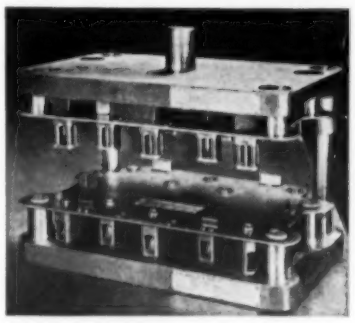
▲ For more details circle **NED-124 K3** on enclosed inquiry slip ▲

VACUUM FORMING MACHINE for thermoplastic sheets

For forming thermoplastic sheets, model 50-20 vacuum forming machine features automatic operation, a 90-degree adjustable platen for differential heating, and can be used with either male or female molds. Sheets up to 52 x 24 in. can be handled, and the Chromalox strip heater assembly provides temperatures up to 1150° F. A 100-gallon vacuum surge tank is provided, and cycle is controlled by four adjustable timers. Process advantages include ability to use preprinted sheets eliminating further decorative operation after forming, capacity for large thin-wall parts, and economical operation both for production and experimental unit quantities. Made by **Vacuum Forming Corp.**, 35A Beechwood Ave., Port Washington, N. Y.

▲ For more details circle **NED-125 K3** on enclosed inquiry slip ▲

MAGNETIC PERFORATING DIES for materials up to ¼-in. steel



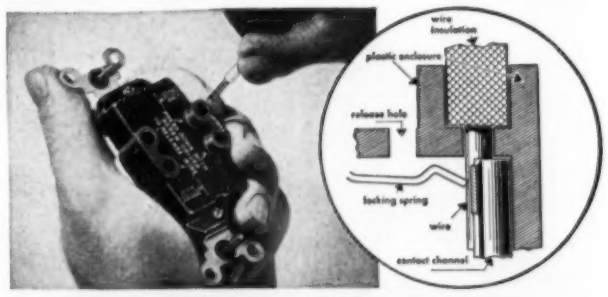
Up to ¼-in. thick mild steel can be pierced with magnetic perforating dies. To make up the perforating die, two blank templets are bored to admit the assembly of punch and die units. When the job is completed, punch and die parts are removed and, with templets, retained for reuse. Punch and die units are available in standard sizes from 1/32 to 3-in. diameters and in oval, square and rectangular shapes. Equipment can be used in practically any press having a maximum shut height of 9½ in. Dies can be made up in almost any desired size. A 12 x 14-in. working area will accommodate up to 25 punches and dies for holes from 1/16 to ½-in. diameters. Made by **S. B. Whistler & Sons, Inc.**, 746 Military Rd., Buffalo 23, N. Y.

▲ For more details circle **NED-126 K3** on enclosed inquiry slip ▲

DO YOU KNOW? Consisting of two reversible blades or four different bits, a shockproof handle, a three-pocket plastic container and an imprinted gift box, the Personalized Vaco X-4 screwdriver set is designed as a Christmas gift. Donors name and address is permanently imprinted in tool handle and on box. Developed by Vaco Products Co., Dept. NED, 317 E. Ontario St., Chicago 11, Ill.

▲ For more details circle **NED-127 K3** on enclosed inquiry slip ▲

NOW...just push in the wires



New G-E "PRESSURE-LOCK" terminals connect wiring devices automatically—without binding screws

You can now make electrical connections by simply pushing straight, stripped wires into these new "pressure-lock" terminals. The spring lock holds the wire securely against a contact channel. Instantly released when desired. There are no binding screws... no looping, hooking, or crimping operations.

These terminals are featured in the new GE3800-line of outlets, switches, and lampholders. Listed by Underwriters' Laboratories, Inc.

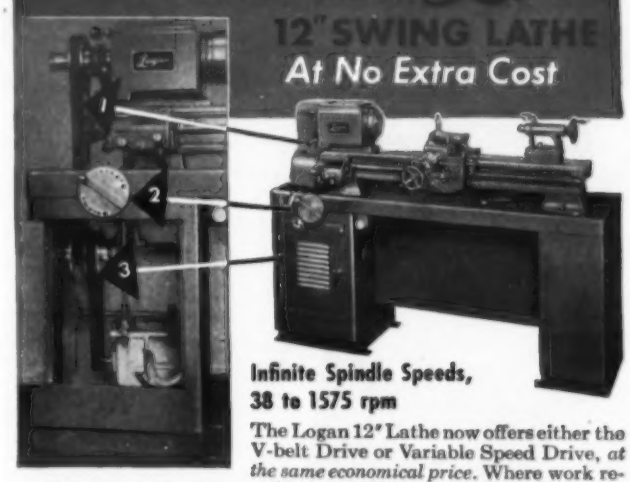
Write for illustrated folder. Section D105-1061, Construction Materials Division, General Electric Co., Bridgeport 2, Connecticut.

You can put your confidence in—

GENERAL ELECTRIC

▲ For more details circle **NED-128 K3** on enclosed inquiry slip ▲

VARIABLE SPEED DRIVE NOW OPTIONAL ON... Logan 12" SWING LATHE At No Extra Cost



Variable Speed Drive Parts

1 Upper Section showing spindle V-pulley and Vari-Speed belt.

2 Vari-Speed Control.

3 Lower section, showing Variable Speed V-Pulleys and Vari-Speed belts.

Belts are easily replaced. Spindle Speed Chart on gear guard provides clearly marked settings for various speeds.

Get facts from your Logan Dealer, or Write

Infinite Spindle Speeds, 38 to 1575 rpm

The Logan 12" Lathe now offers either the V-belt Drive or Variable Speed Drive, *at the same economical price.* Where work requires a variety of spindle speeds, the Logan Variable Speed Drive definitely reduces costs. On large diameter facing, optimum surface speed is maintained by simply turning the Speed Control Handle as the cutter goes into the work. No need to stop the lathe. No belt shifting. See *all* the features of the 12" Logan.

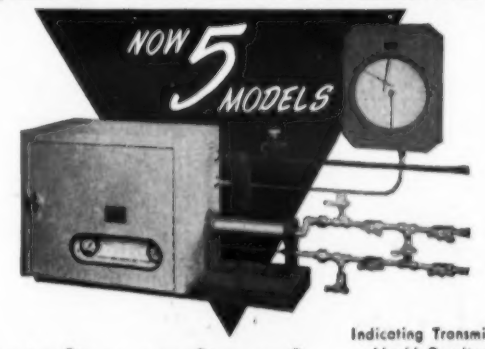
Brief Specifications

Swing over bed and saddle wings, 12" . . . Center Distances, 23" and 35" . . . Turret Lathes Models have 43" bed length . . . 1⅛" spindle hole . . . 1" collet capacity . . . 16 standard V-belt drive spindle speeds, 35 to 1230 rpm. . . . Variable Speed Drive Models, infinite spindle speeds from 38 to 1575 rpm.

LOGAN ENGINEERING CO., Lawrence and Lamon Aves., Chicago 30, Ill.

▲ For more details circle **NED-129 K3** on enclosed inquiry slip ▲

LIQUID GRAVITOMETER



Indicating Transmitting Liquid Gravitometer

...for pipelines, gasoline and chemical plants, refineries, etc.

Ruggedly built for hard field use but with laboratory accuracy, the long accepted ARCCO-Anubis Liquid Gravitometer with all its splendid features is now available for recording, controlling, indicating, transmitting, or various combinations of these functions. Write us fully about your application and request Bulletin No. 111 Revised.

1. RECORDING LIQUID.
2. INDICATING TRANSMITTING.
3. INDICATING CONTROLLING.
4. RECORDING TRANSMITTING.
5. RECORDING CONTROLLING.

AMERICAN RECORDING CHART CO.
3113 E. 11th St. • Los Angeles 23, Calif.

▲ For more details circle **NED-130 K3** on enclosed inquiry slip ▲

THE Sutton MOTOR DRIVEN PRESSURE BLOWER

THREE SIZES ¼, ½, 1 H.P.

USE FOR
- EXHAUSTING
- DUST
- SMOKE
- FUMES
- VAPOR
- FORGE BLASTING

CONVEYING COTTON, WOOL, SHAVINGS
COOLING AND DRYING

MADE OF LIGHTWEIGHT CAST ALUMINUM ALLOY. CENTRIFUGAL TYPE. Direction of discharge may be changed to any of eight 45 degree positions. Straight wall construction reduces windage and increases efficiency. Standard 3450 r.p.m. direct-connected 60-cycle ball bearing motor, open or totally enclosed types. Capacities, 100 to 800 cu. ft. per min. at static pressures from ½" to 6". Write for literature and prices.

Sutton Manufacturing Corp.
112 W. WILSON AVENUE NORFOLK, VIRGINIA

▲ For more details circle **NED-131 K3** on enclosed inquiry slip ▲

Check the Extra Values in WAYNE COMPRESSORS

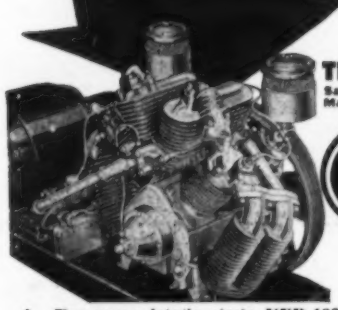
FOR LONGER, TROUBLE-FREE SERVICE
LOWER OPERATING COSTS—POSITIVE AIR

1. GUARANTEED FULL-RATED OUTPUT
2. JOB-ENGINEERED FOR YOUR PLANT
3. EXTRA COOLING CAPACITY
4. LONGER SERVICE PISTONS
5. "WEAR-GUARD" LUBRICATION

Let the extra values in Wayne Air Compressors go to work for you, for extra production in your plant. From first design to finished assembly, every Wayne Compressor is built to give you extra efficiency . . . more value for your compressor dollar.

Wayne engineering features are aimed at providing a better compressor in every way — cooler in operation, with lower power consumption, higher efficiency, lower maintenance costs, and longer, trouble-free life.

When you buy a Wayne Compressor, you buy guaranteed full-rated usable air output . . . all the air you need for all your machines. And every Wayne Compressor is backed by a nation-wide service organization. Make your next compressor Wayne.



THE WAYNE PUMP CO.
Salisbury Maryland — Toronto Canada

Wayne NATION WIDE SERVICE

For more details circle NED-132 K3 on enclosed inquiry slip

NEW—Improved Case For Midget MEGGER® Insulation Tester

Operates Without Removing from Case

The ever popular Midget Megger Insulation Tester is packed in a leather case of new design. As with a fine camera case you simply flip back the lid of the case and the instrument is ready for use. The leads are stored in a compartment under the instrument. The Midget Megger Test Set contains its own unfailing source of test current in a hand generator. No dependence on batteries or other power supply. Ratings up to 50 megohms, 500 volts d-c are available.

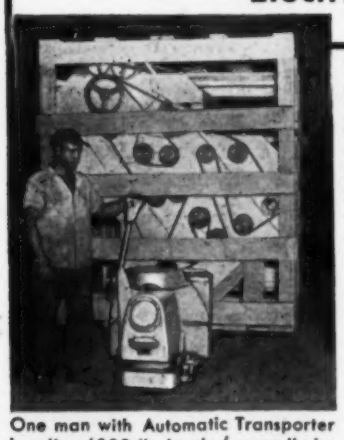
Write for BULLETIN 21-85-D

JAMES G. BIDDLE CO.
Electrical & Scientific Instruments
1316 ARCH STREET, PHILADELPHIA 7, PA.

For more details circle NED-133 K3 on enclosed inquiry slip

TRY THIS PROVED WAY TO BIGGER PROFITS

Cost Cutting Automatic® Electric Trucks



One man with Automatic Transporter handles 4000 lb. loads (manually he handled only 1500 lbs.)—50% faster! Saving two-thirds in time and costs for Continental Gin Machinery Co., Alabama.

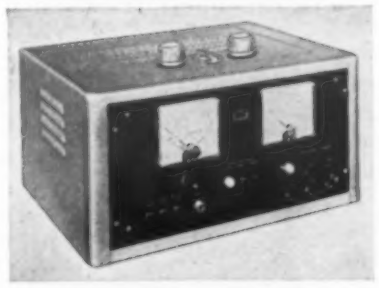
When you take more time to do a job than you'd have to with *really modern* equipment, your costs, too, are higher—your profits less! That's why so many leading firms (as in application shown on this page) are switching to modern Automatic Electric Trucks.

You see, Automatic makes a truck for practically every kind of materials handling job...to do *that* specific job at low cost—profitably! Thus your Automatic truck is never *under*-powered and inefficient nor *over*-powered and costly to operate. It's "keyed-to-the-job" for maximum efficiency, minimum cost!

For full details write . . . Automatic®
61 W. 87th St., Dept. T-3, Chicago 20, Ill.
WORLD'S LARGEST EXCLUSIVE BUILDER OF ELECTRIC-DRIVEN INDUSTRIAL TRUCKS

For more details circle NED-134 K3 on enclosed inquiry slip

RATEMETER for alarm, control and recording

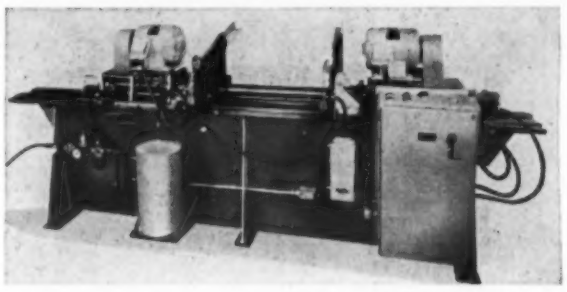


A precision counting ratemeter, model RAC-11 has built-in circuits for alarm, control, and graphic recording and is suitable for process control laboratory monitoring and similar applications. It is almost unaffected by normal line voltage fluctuations, and has little drift. It can be operated by a Geiger Mueller tube or by any device producing similar pulses, such as a proportional counter converter. Instrument operates on standard line voltages between 100 and 130 v, and accepts continuously variable input voltages between 250 and 10,000. Made by **Nuclear Measurements Corp.**, Dept. A, 2460 N. Arlington Ave., Indianapolis 18, Ind.

For more details circle NED-135 K3 on enclosed inquiry slip

CHAMFERING & CENTERING UNIT hydraulic feeds allow production of over 6000 pieces per hour

Production rates in excess of 6000 pieces per hour result from hydraulic powered, magazine feed arrangement and motorized heads equipped with hy-



draulic feeds on line of double end boring, chamfering and centering machines. Machine shown chamfers both inside and outside diameters and faces both ends of 3/16 to ⅝-in. diameter metal tubing from 3 to 40 in. long. Length adjustment is automatic, and interchangeable clamp jaws are provided for various tube diameters.

On welded steel base, machine measures 12 x 2 x 4½ ft. A 3-hp motor powers each head, and push-button controls on top of electrical panel control automatic machine cycle. Separate hydraulic power pack unit having 12-gpm, 1000-psi pump; 10-hp motor; and 40-gal tank provides power for spindle feed. An air accumulator tank for work feed mechanism air cylinders is mounted at front of machine. Cutter spindle travel is adjustable up to 6 in. Made by **Walter P. Hill, Inc.**, Dept. 1, 22183 Telegraph Rd., Detroit 19, Mich.

For more details circle NED-136 K3 on enclosed inquiry slip

BOLTS · NUTS

CLARK
QUALITY INDUSTRIAL FASTENERS SINCE 1854

CLARK BROS. BOLT COMPANY TO COMPLETE A CENTURY OF SERVICE

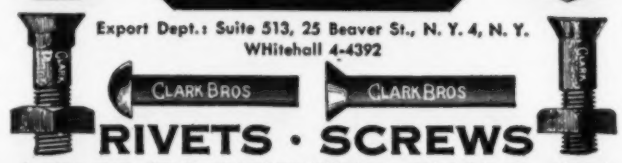
Nearing the completion of one hundred years in the fastening field, it was at the very beginning that CLARK BROS. knew . . . while initiative starts a business, the trust of others maintains it, and only constant effort toward further improvement expands it.

Since 1854 dependability of product and honesty of policy have provided the CLARK BROS. BOLT COMPANY with a solid foundation upon which to build another century of service to those requiring bolts, nuts, rivets and screws wherever fastening fast with greater security is a must.

6-0-5R

CLARK BROS BOLT CO.
135 Canal Street.
MILLDALE, CONN

Export Dept.: Suite 513, 25 Beaver St., N. Y. 4, N. Y.
WHitehall 4-4392



RIVETS · SCREWS

For more details circle NED-137 K3 on enclosed inquiry slip

THE MATEER ELECTRIC FILLER HANDLES THEM ALL!

LIQUIDS · OILS · POWDERS · PASTES

COMBINED LIQUIDS AND SOLIDS
1/500 oz. to 2 Pounds
20 to 70 Per Minute
Up to 750° F

SAVE TIME AND MONEY WITH THE MATEER ALL ELECTRIC FILLING HEAD

Totally enclosed, manual or automatic. Accuracy as close as ±½%. Synchronize this self contained filling head with existing production lines and processing systems.

Jacketed and electrically heated hoppers available for handling cold and hot materials up to 750° F. Hot waxes, insulating compounds and asphalts handled without difficulty.

Send full information and samples of material to be tested. Write Dept. 105 for fully illustrated bulletin.

G. DIEHL MATEER & CO.
Lincoln Highway • Devon, Pa.

For more details circle NED-138 K3 on enclosed inquiry slip

HERE'S THE TEAMMATE FOR YOUR LATHE

Get fast, convenient grinding of lathe centers, cutters, reamers, rolls and dies. You can do it with THE CINCINNATI Ball Bearing Tool Post Grinder!

THE CINCINNATI mounts on the compound rest of any lathe with a 9" swing, or larger. It grinds within 2½" of the maximum swing . . . can be swivelled around the clamping bolt . . . spindle height is readily changed. Motor mount is adjustable for easy maintenance of belt tension. Write today! Ask for name of your distributor or Bulletin 53-MD.

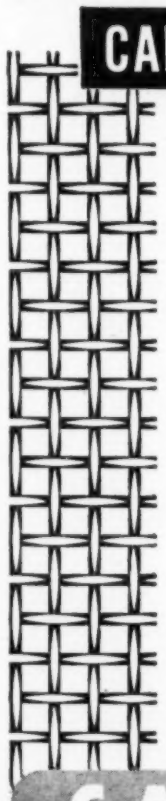
THE BEST IN DRILLS, GRINDERS, BUFFERS, PORTABLE TOOLS

TRADE The Cincinnati MARK

THE CINCINNATI ELECTRICAL TOOL CO.
Division of THE R. K. LeBLOND MACHINE TOOL CO.
CINCINNATI 8, OHIO

For more details circle NED-139 K3 on enclosed inquiry slip

CAL-WIC WIRE CLOTH



THE RIGHT WEAVE

• • • for every industrial requirement including screening, filtering, grading, cleaning and numerous other types of processing.

THE RIGHT WEIGHT

• • • precision-fabricated for long-lasting dependability and economy.

THE RIGHT METAL

• • • for highest resistance to chemical action, moisture, corrosion, abrasion and extremes of temperature.

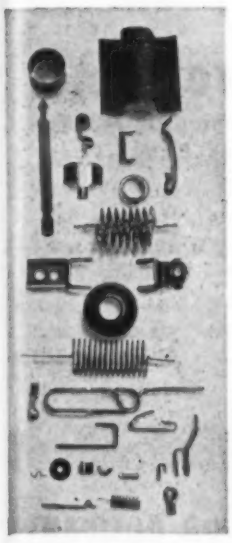
For additional information write or phone our nearest sales office.

EAST: Wickwire Spencer Steel Division, Clinton, Mass.
WEST: The Colorado Fuel and Iron Corporation, Denver, Colorado
PACIFIC COAST: Pacific Coast Division, Oakland, California

CAL-WIC INDUSTRIAL SCREENS
THE COLORADO FUEL AND IRON CORPORATION

For more details circle NED-140 K3 on enclosed inquiry slip

Priced Right!
WIRE FORMS
& Metal Stampings



High-speed, quality production with custom-made precision. Wire formed to any shape for every need.

IMMEDIATE CAPACITY FOR DEFENSE SUB-CONTRACTS

STRAIGHTENING & CUTTING
Perfect straight lengths to 12 ft.
.0015 to .125 diameter

WIRE FORMS
.0015 to diameter

SMALL METAL STAMPINGS
.0025 to .035 thickness
.062 to 3 inches wide

Specializing in Production of Parts for Electronic, Cathode Ray Tubes and Transistors

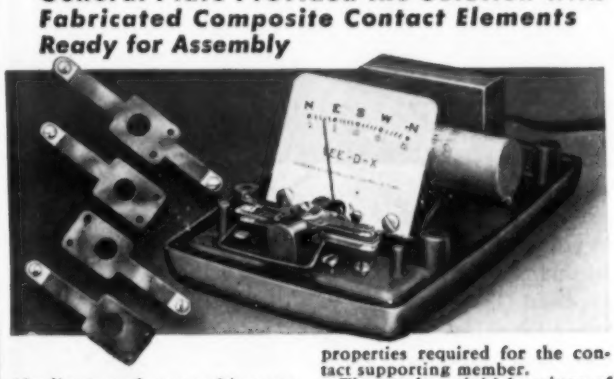
Write for illustrated folder. Send Blueprints or Samples for Estimate.

ART WIRE and STAMPING COMPANY
15 BOYDEN PLACE
NEWARK 2, N. J.

▲ For more details circle **NED-141 K3** on enclosed inquiry slip ▲

PROBLEM:
Reduce Fabrication and Assembly Costs for Electrical Contact and Switch Blade Assemblies

SOLUTION:
General Plate Provided the Solution with Fabricated Composite Contact Elements Ready for Assembly



A leading manufacturer of Antenna Rotators required contact and switch blade assemblies for a control switch that operated two synchronized circuits. To produce the assemblies by attaching a separate contact, rivet or button to the spring blades meant high fabrication and assembly costs and special machinery.

General Plate provided an economical solution with fabricated composite contact elements ready for assembly.

The complete contact and blade elements are made from a General Plate striped composite metal. The contact is a silver alloy which gives the necessary electrical performance. The blade is phosphor bronze which provides the spring properties required for the contact supporting member.

The result — initial savings of $7,000 in assembly costs alone by using General Plate fabricated composite contact elements.

By letting General Plate fabricate your complete contact assemblies, you will save money, time and trouble . . . needless equipment cost...contacts and/or contact assemblies made to your exact specifications are shipped to you ready for installation.

If you fabricate your own parts, General Plate Composite Contact Materials will still save you money, too.

Write for complete information and Catalog PR700.

METALS & CONTROLS CORPORATION
GENERAL PLATE DIVISION
810 FOREST ST., ATTLEBORO, MASS.

▲ For more details circle **NED-142 K3** on enclosed inquiry slip ▲

preferred for **ease** and ***speed***
in 2½" to 4" pipe work

TOLEDO
No. 2BR
PIPE THREADER

Put this popular Toledo on your 2½" to 4" pipe . . . produce perfect tapered threads with *top-speed* . . . and a *minimum of effort.*

EFFICIENT HAND OPERATION . . . Light weight . . . easy handling . . . convenient carrying handles. Employs Toledo receding die principle . . . 5 die segments . . . highest quality tool steel.

HIGH SPEED . . . Operated with a Toledo Power Drive, the 2BR threads 4" pipe in less than 2 minutes!

ORDER THROUGH YOUR SUPPLY HOUSE . . . Write for catalog. The Toledo Pipe Threading Machine Co., Toledo Ohio.

RELY ON THE LEADER **TOLEDO**

PIPE TOOLS . . . POWER PIPE MACHINES . . . POWER DRIVES

▲ For more details circle **NED-143 K3** on enclosed inquiry slip ▲

VARIABLE SPEED DRIVE
improved model has 50 per cent more power and better control

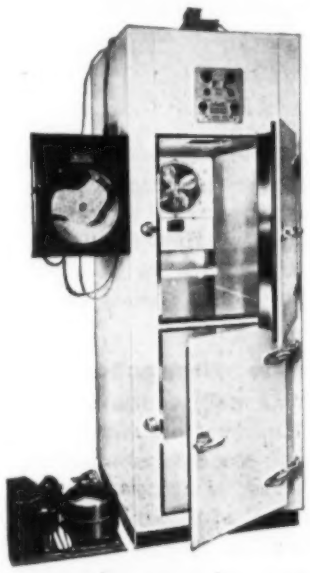
Improvements made in 1/6 to ¼-hp model 28 infinitely variable speed drive include 50 per cent more power in about the same size, use of two-piece housing with integral base and better control that provides equal changes in speed for equal changes in dial setting. Drive delivers all speeds from any desired maximum to zero, and speed can be changed with transmission running or stationary. Overload protection is incorporated.

Transmission is furnished as standard with micrometer control dial permitting easy adjustment to or between the 400 graduations. It can be had in mechanical reversing style in which all speeds from top to zero can be obtained forward and reverse without change in output rotation. Drive is available with wide variety of built-in reducer or step-up gearboxes, including single and double reduction helical spur reducers and right angle worm gear units with output shaft horizontal or vertical. Made by **Graham Transmissions, Inc.**, Dept. NED, Menomonee Falls, Wis.

▲ For more details circle **NED-144 K3** on enclosed inquiry slip ▲

LABORATORY TESTING CABINET
with blower and time-pattern control

Equipped with blower and time-pattern controllers, model LSC-16 laboratory cabinet is designed for testing and controlling manufacture of various products under required conditions of temperature and humidity. It has a temperature range from 0 to 300° F. Temperature and humidity change and length of cycle at a predetermined plotting over 24 to 48-hr periods are automatically controlled to plus or minus 1° F. Side ports to permit insertion of instrument leads to data recorders are available, as is door with Thermopane inspection window and window wiper. Two 17½ x 26½ and two 17½ x 18-in. shelves are standard. Interior is polished stainless steel. Made by **Anetsberger Brothers, Inc.**, 180 N. Anets Dr., Northbrook, Ill.



▲ For more details circle **NED-145 K3** on enclosed inquiry slip ▲

SW-42 Double DUALOC Grommet Has a Wide Variety of Uses

• The ACCO *Registered* Double DUALOC Grommet is made of cable-laid wire rope. All-steel construction with flexibility comparable to manila. Spliced section placed over hook doubles bearing surface and increases sling life. The double DUALOC makes this the strongest grommet obtainable, size for size. Yet cost is lower than for ordinary types.

Can be used in vertical, basket, and choker hitches. Proof-tested and warranted at 5 to 1 safety factor. Sizes from 9/32" to 1½" diameter, any circumference.

See your ACCO *Registered* Wire Rope Sling Distributor

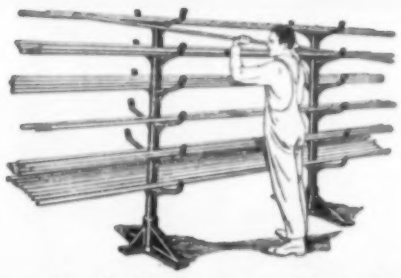
ACCO *Trade Mark. Patent No. 2461079
In Canada: Dominion Chain Co. Ltd. Niagara Falls, Ontario

WIRE ROPE SLING DEPARTMENT
AMERICAN CHAIN & CABLE
Wilkes-Barre, Pa., Chicago, Denver, Houston, Los Angeles, New York, Odessa, Tex., Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

ACCO Registered DUALOC Slings

▲ For more details circle **NED-146 K3** on enclosed inquiry slip ▲

for EFFICIENT HANDLING and ORDERLY STORAGE



You save time, both in storing and in issuing, when you use Brown Sectional Racks. Open sides speed handling. Complete visibility permits quick selection to save waiting mechanics time.

Maximum flexibility in arrangement is possible because each Brown Rack is independent and self-contained, need not be bolted to floor. Easily relocated. Systemized storage with Brown Racks promotes good housekeeping, cleanliness.

All iron and steel construction, can't burn, bend, sag or warp. Never wear out.

Get these values now! Write for complete specifications and prices on wide range of models and sizes. Brown Engineering Co. 129 N. Third St., Reading, Pa.

BROWN QUICK-SERVE RACKS

▲ For more details circle **NED-147 K3** on enclosed inquiry slip ▲

Here's the most complete line of wire-wound resistors on the market—a wider range of types, sizes, and ratings to fit your needs. There are fixed, tapped, adjustable, precision, and non-inductive resistors, with a variety of terminals and mountings. And, every one of these Ohmite resistors will give you long life and dependable, trouble-free performance.

OHMITE MFG. CO.,
3620 W. Howard St., Skokie, Ill. (Suburb of Chicago)

Write on Company Letterhead for Catalog No. 40

Be Right with
OHMITE
RHEOSTATS • RESISTORS • TAP SWITCHES

▲ For more details circle **NED-148 K3** on enclosed inquiry slip ▲

LEITELT TWIN SCREW

Power Ramp

ANSWER to TOUGH DOCK PROBLEMS

Forms part of dock when not in use. 18 inch vertical adjustment Capacity: 7½ tons of live load on any axle; 10 tons dead weight

- ★ **Positive drive screw lift** — Board always under complete control
- ★ **15" hinged plate follows truck up or down** — Requires no manual adjustment
- ★ **Built in two sizes to fit your needs** — 6' wide; 6' and 8' long
- ★ **Complete, self-contained power unit** — Ready and inexpensive to install
- ★ **Safe with unbalanced load** — Twin screws support two front corners of dock
- ★ **Automatic safety controls** — Dock stops automatically at top and bottom limits
- ★ **Operates in any kind of weather** — All working parts fully protected against dirt and weather

Karl A. HERMAN Company
412 FULLER AVE., N.E. GRAND RAPIDS, MICHIGAN

▲ For more details circle **NED-149 K3** on enclosed inquiry slip ▲

Bendix automotive Electric Fuel Pump

Result

- **Full rated engine power**
- **Better speed**
- **Better schedules**

The Bendix* Electric Fuel Pump surpasses all pumps of its type in output with a delivery of more than 30 gallons per hour—in many installations one Bendix pump replaces two or more ordinary electric pumps.

Thus with vehicles running at full rated engine power, schedules are maintained and operating cost reduced.

This generous fuel flow means that under most adverse operating conditions of road or weather, trucks start quicker, run better and are more economical to operate.

Install Bendix Electric Fuel Pumps in your trucks and you'll notice the difference from the very first mile.

Sold by independent garages and service stations. For a descriptive folder write to Dept. J. *REG. U.S. PAT. OFF.

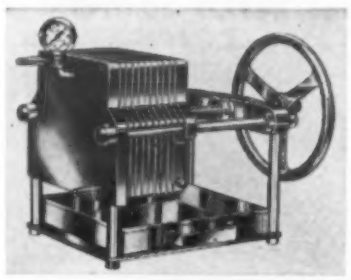
ECLIPSE MACHINE DIVISION
Elmira, New York · Division of Bendix AVIATION CORPORATION

Check these Features

- 30 gallons per hour.
- Helium sealed—for longest life.
- Prevents vapor lock.
- Built-in pressure release—no flooding.
- Instant hot weather re-starts.
- Better cold weather starting.
- Only 7 watts power at maximum fuel delivery.

▲ For more details circle **NED-150 K3** on enclosed inquiry slip ▲

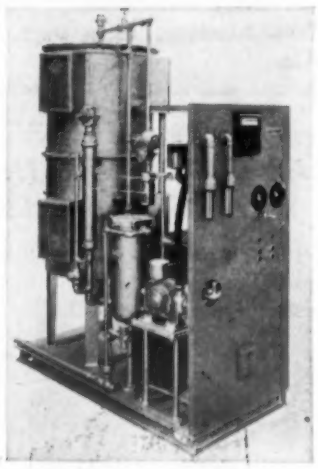
PROCESS FILTER
for pyrogen and bacterial retention



Built primarily for pyrogen and bacterial retentive work, model 8-ESS filter is available in polished stainless steel, Lucite and stainless steel, or all-Lucite construction. It accommodates 8-in. square asbestos sheets, and for pyrogen work provides double filtration and includes a stone fiber eliminator. Where liquid temperatures are below 120° F and where sterilization is not required, the Lucite models offer visual process inspection during the working cycle. A 4-in. model with similar construction is also available. Both models can also be used for filtration of perfumes, chemicals, essential oils, drugs, etc. Made by **Ertel Engineering Corp.**, 2 N. Front St., Kingston, N. Y.

▲ For more details circle **NED-151 K3** on enclosed inquiry slip ▲

GAS GENERATOR
endothermic type for heat treating

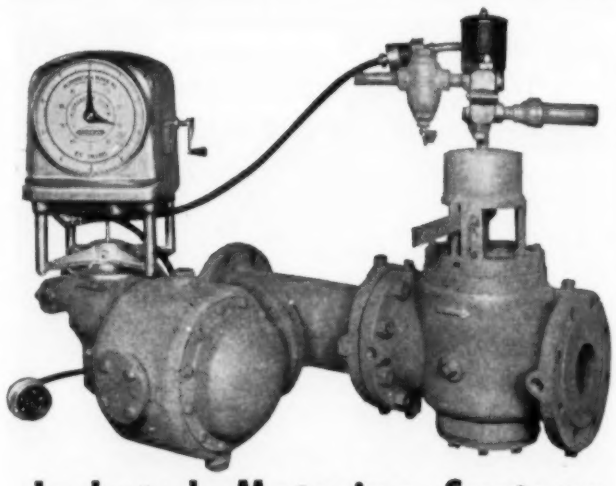


Controlled atmosphere of consistent chemical analysis for heat treating operations is produced by this endothermic gas generator. Applications include such operations as bright hardening of high carbon steels without oxidation or decarburization; bright hardening of high speed steel; annealing and normalizing; bright copper brazing, carburizing and carbonitriding; and sintering and powder metallurgy processes. Generator is a packaged unit consisting of air filter, air-gas mixing machine, gas cracking chamber, gas cooler, control panel and transformer. Sizes rated at 300, 500 and 750 cfh are available. Made by **Hevi Duty Electric Co.**, P. O. Box 563, Milwaukee 1, Wis.

▲ For more details circle **NED-152 K3** on enclosed inquiry slip ▲

DO YOU KNOW? It's easy to select and specify the right drill and lubricant as well as the correct tap for a given job with the Tap Selector. Operating same as a slide rule, this device presents information on fractional and machine screw size taps, recommended drill size with decimal equivalent, recommendations for various classes of fits and grinds, major pitch and root diameters, and tap limits for various grinds. Selector is free! Offered by Threadwell Tap & Die Co., Greenfield, Mass.

▲ For more details circle **NED-153 K3** on enclosed inquiry slip ▲



Jacketed Metering Systems
for automatic batching of viscous materials

The Fluidometer System is available either jacketed or unjacketed. A jacketed Fluidometer System will handle heavy, hot, sticky materials as easily, as safely and as accurately as the unjacketed Fluidometer handles light, easy running liquids.

Fluidometer's accuracy and dependability have been proved in years of service under widely varying conditions. Anything that can be handled through a meter can be automatically batched by Fluidometer.

Write for Bulletin FL-49.

H&B ESTABLISHED 1887

HETHERINGTON & BERNER INC.
751 Kentucky Avenue Indianapolis 7, Indiana

▲ For more details circle **NED-154 K3** on enclosed inquiry slip ▲

BACK SAVER

DINGS MAGNA-HOIST...
Powerful, 8½" x 11" Electromagnet Makes Lifting Heavy Metal Pieces Easy—Fast

HERE'S a time and labor saving answer to the problem of lifting heavy metal work onto and off machine tool beds, into trucks or storage. Dings Magna-Hoist makes these jobs easy by lifting the work magnetically, with no strain or pain on anyone's part. One man takes over where 2 or more were needed. *Write today for BULLETIN B-1403-A.*

Dings
MAGNETIC SEPARATOR COMPANY
4758 W. Electric Ave., Milwaukee 46, Wis.

▲ For more details circle **NED-155 K3** on enclosed inquiry slip ▲

ENGINEERS *Here's Help!*

If you are:
- Recording
- Controlling
- Measuring

Temperature and/or Pressure

These four big catalogs will help you to select the right Gotham Instrument for your application. They are yours for the asking. Just write today on your business letterhead. Our engineers will be happy to help you solve special instrumentation problems without obligation.

Keep Everything Under Control With Gotham

GOTHAM INSTRUMENTS
Division of American Machine and Metals, Inc.
Dept. 1, 233 Broadway, New York 12, N.Y.

▲ For more details circle **NED-156 K3** on enclosed inquiry slip ▲

ONE OR ONE THOUSAND
Perfectly Sharpened—SMALL DRILLS—Quickly—Easily—Anyone Can Do it

Available on Cabinet Stand

Black Diamond PRECISION DRILL GRINDER

- ✓ ONLY drill grinder that mechanically positions drill for grinding!
- ✓ ONLY drill grinder that grinds BOTH LIPS IN ONE OPERATION!
- ✓ ANYONE can grind a drill expertly on a Black Diamond

No guesswork—just position the drill, grind and you have a perfect point! *Write for bulletin.*

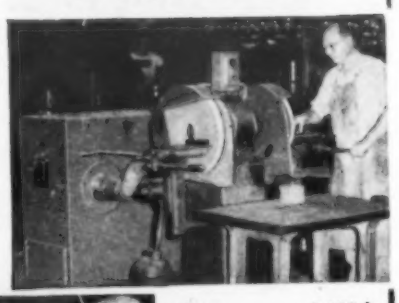
BLACK DIAMOND SAW AND MACHINE WORKS, INC
NATICK, MASSACHUSETTS

▲ For more details circle **NED-157 K3** on enclosed inquiry slip ▲

STOP DUST INSTANTLY WITH DUSTKOP

300 cfm to 10,000 cfm standard pre-tested units available in stock

- LOW COST
- IMMEDIATE INSTALLATION
- SAVES HEAT
- PORTABLE



2405 ◀ cfm 1400▲ cfm

DUSTKOP

WRITE FOR

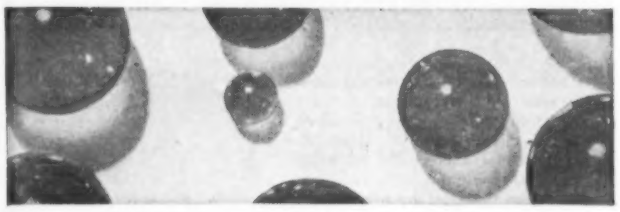
- RECOMMENDATION about your dust problem. No obligation
- CATALOG 605-2

AGET-DETROIT CO.

202 S. Main St. Ann Arbor, Mich.

▲ For more details circle NED-158 K3 on enclosed inquiry slip ▲

NOW—Precision Balls of Synthetic Sapphire



These balls of synthetic sapphire, polished to within 20 micro-inches of sphericity, are resistant to wear, heat, and corrosion. In many applications they need not be lubricated.

Available in 1mm, 1/16 inch, ⅛ inch, and ¼ inch sizes, and in three surface finishes.

PROPERTIES

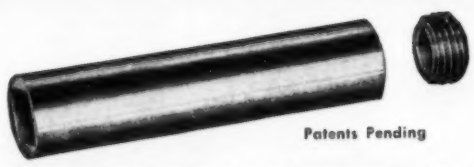
Coefficient of Friction	0.140
Hardness (Knoop)	1525-2000
Dielectric Constant	7.5-10
Modulus of Rigidity	21.5-27.5 x 10^6psi
Thermal Coefficient of Expansion at 50°C (per °C x 10^6)	5.0-6.7
Chemical Resistance	Unaffected by acids, dilute alkali.

Call or write any LINDE office for information on these balls or the other forms of synthetic sapphire.

LINDE AIR PRODUCTS COMPANY
A Division of Union Carbide and Carbon Corporation
30 East 42nd St. UCC New York 17, N. Y.
In Canada: Dominion Oxygen Company, Limited, Toronto

▲ For more details circle NED-159 K3 on enclosed inquiry slip ▲

How SQUARE HOLED SLEEVES SPEED UP TOOL-MAKING!



Patents Pending

One of the most difficult problems in toolmaking can be solved easily and quickly with Sturdy Square Holed Sleeves. The perfection of broached square holes can be had in boring bars, milling cutters and many other applications at a small fraction of the cost of imperfect hand-made square holes. The Sturdy Square Holed Sleeve consists of a round sleeve with a perfectly square hole broached through the center. This hole is tapped at one end to receive a back-up screw which is furnished with the Sleeve. The Sleeve can be sweated or pressed into a drilled and reamed hole to make a perfectly square accurate hole in a very few minutes.

The Sturdy Square Holed Sleeve will save you many hours and many dollars in the making of boring bars, tool holders and other tools requiring square holes.

SLEEVES MADE IN FOLLOWING SIZES:
3/16, ¼, 5/16, ⅜, 7/16, ½, ⅝, ¾, 1"

Write for Literature

STURDY BROACHING SERVICE
23514 TELEGRAPH RD., DETROIT 19, MICH.

▲ For more details circle NED-160 K3 on enclosed inquiry slip ▲

VARIABLE TRANSFORMER controls large power for its size

Preadjusted brush assembly of the type 300BU Adjust - A - Volt auto - transformer maintains almost constant pressure from full-brush to no-brush: Electrical connection between brush and current take-off point of the brush assembly is direct. Unit is dimensionally small and compact and controls large power for its size. It is suitable for clockwise or counter-clockwise rotation and over-voltage (0 to 135 v) or line voltage (0 to 115 v) operation. Maximum load rating of 0.4-kva is available in single or ganged assemblies. Applications include power supplies, oven heat control, instruments and control of motor speeds. Made by **Standard Electrical Products Co.,** 2239 E. Third St., Dayton, O.

▲ For more details circle NED-161 K3 on enclosed inquiry slip ▲

INTERVAL TIMER signals as cycles are completed

Adaptable to every signalling requirement, this interval timer provides on-the-spot or remote audible and visual signals indicating completion of set timing cycle. Two models are available, No. 8033D with a 30-minute full range, and No. 8066D a 60-minute full range. Timer is hand set to any requirement. Of the two sets of leads brought into the housing, one is for single-pole connection to close operating circuit of the machine being controlled, the other feeds pilot light and signal receptacle. A push button switch is used to reset the mechanism. Operating loads of up to 12 amp, 110 v ac or dc can be controlled. Made by **Walser Automatic Timer Corp.,** 617 Graybar Bldg., New York 17, N. Y.

▲ For more details circle NED-162 K3 on enclosed inquiry slip ▲

DO YOU KNOW? Believed to offer more complete protection to ferrous surfaces than has heretofore been possible, Atpet 100 rust-inhibiting additive for oil has withstood 634 hours' exposure in a standard humidity cabinet test when used in only 1 per cent concentration in oil. Indicated uses include protection of engines, turbines, and ferrous tools or components in storage or during production stages. Developed by Atlas Powder Co., Industrial Chemical Dept., Wilmington 99, Del.

▲ For more details circle NED-163 K3 on enclosed inquiry slip ▲

Quick, Easy, Low Cost Way to

STOP LEAKS

..Seal Out Dampness in Basement Walls!

Leaks in concrete walls, masonry, cinder block, etc., can be stopped quickly with FLEXTITE. Actually seals against water pressure. Efficient as a trowel coat for sealing off water and dampness. Transforms leaky basement walls into dry surfaces. (Minimum quantity 6 gallons)

USED IN
- ELEVATOR PITS
- TUNNELS, DRAINS
- WATER TANKS
- RETAINING WALLS

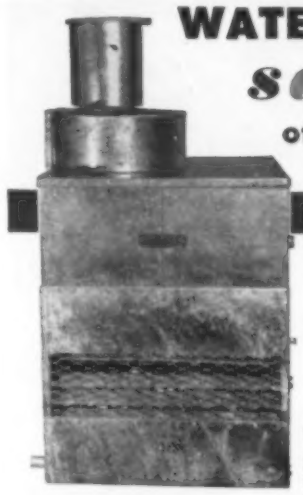
MAIL COUPON FOR TRIAL OFFER

FLEXTITE

FLEXROCK COMPANY Offices in Principal Cities
3603-F Filbert St., Philadelphia 4, Pa.
Please send me complete FLEXTITE information and details of TRIAL ORDER PLAN — no obligation.
Name .....
Company .....
Address .....

▲ For more details circle NED-164 K3 on enclosed inquiry slip ▲

WATER PROBLEM? save 95% of your cooling water



with Acme towers

Whether your water supply problem is for one molding machine or for the air conditioning of the entire plant Acme has a cooling tower tailored to fit your needs. All Acme Towers are engineered and designed for the basic purpose of reducing by more than 95% the amount of water used without a tower.

Acme JCT models are small, compact and highly efficient. They are galvanized for indoor or outdoor operation. Capacities range from 3 to 12 tons.

For the bigger jobs you'll need Acme ACT models with capacities ranging from 8 to 60 tons.

Write for bulletin giving data on Acme's complete line of Cooling Towers.

ACME INDUSTRIES, INC.
JACKSON, MICHIGAN

Continuously serving the Refrigeration and Air Conditioning Industry since 1919

▲ For more details circle NED-165 K3 on enclosed inquiry slip ▲

FOR MATERIAL HANDLING— more and more—the swing is to wide-base pneumatic tires

GENERAL

INDUSTRIAL PNEUMATIC TIRES

More Designers are specifying wide-base General Pneumatics. They know Generals add these extra selling points to handling equipment.

SAVE TIME · MONEY · LABOR

- MORE LOAD CAPACITY AT LOW OR HIGH SPEEDS
- CUSHION EQUIPMENT AND LOADS REDUCING BREAKAGE AND SPILLAGE
- SAVE HIGH COST FLOORS AND FLOOR SURFACES
- SLOW, EVEN WEAR FOR LONG SERVICE
- HIGH FLOTATION FOR EASIER ROLLING OVER SOFT GROUND
- ROLLS EASIER, SMOOTHER OVER ALL SURFACES

Available separately or in assemblies of Tires, Tubes and Wheels. Size O.D. 8" to 27"—200 to 4000 lbs. cap. for low or high speeds.

THE GENERAL TIRE

Rigid CASTER FORKS Swivel

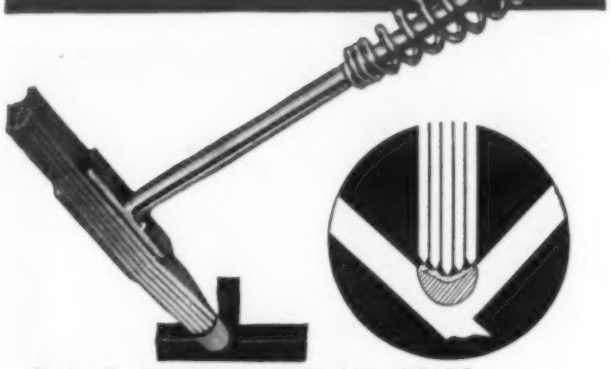
Wide-base caster forks engineered to carry heavier loads without adding dead weight to equipment. Available in identical pairs in a wide range of sizes.

SEND FOR CATALOG . . . DEPT. 4

THE GENERAL TIRE & RUBBER CO. AKRON, O.

▲ For more details circle NED-166 K3 on enclosed inquiry slip ▲

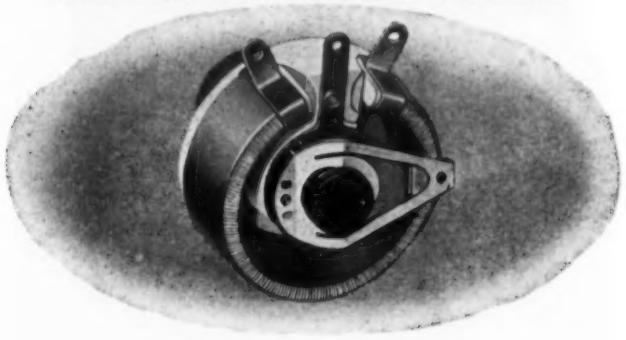
"Multi-Pic"
WELD-CLEANING HAMMER



HAS 5 CONTOUR FORMING HEADS . . . . PATENTED FREE - FLOATING HEAD DESIGN DELIVERS 5 SEPARATE CLEANING BLOWS WITH EACH SWING . . . CLEANS 5 TIMES FASTER . . . LASTS 5 TIMES LONGER THAN SINGLE-HEADED HAMMERS.
Illustrated Model MP-2-M $2.40 each.
Quantity Prices 10 to 20% Less.
WOOD HANDLE AND BRUSH EQUIPPED MODELS ALSO AVAILABLE. WRITE FOR BULLETIN FORM MP6

Manufactured By
BERNARD WELDING EQUIPMENT COMPANY
10228 Avenue N. Chicago, Illinois
For more details circle NED-167 K3 on enclosed inquiry slip

TWO EXCLUSIVE FEATURES IN
NEW VITROHM RING RHEOSTATS
GIVE POSITIVE CURRENT CONTROL



MYCALEX insulating hub of Ward Leonard's new Ring Rheostats is *molded* to one end of the drive shaft to give more positive control and eliminate backlash.

Double ended, balanced spring steel contact arm, interlocked to the insulating hub, assures uniform contact pressure.

Stock types: 25R and 50R, 25 and 50 watts, 1 to 10,000 ohms.

Write Ward Leonard Electric Company, 51 South St., Mount Vernon, N.Y.

WARD LEONARD ELECTRIC CO.
Result-Engineered Controls Since 1892
RESISTORS • RELAYS • MOTOR CONTROLS • CHROMASTER
For more details circle NED-168 K3 on enclosed inquiry slip

This glass can take impact!

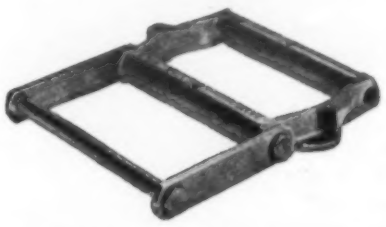
Dropped 10 feet, a ½-lb. steel ball bounces right off ¼"-thick L·O·F *Tuf-flex** Tempered Plate Glass. And *Tuf-flex* can carry more load, resist greater thermal shock than untempered glass. Use it where you couldn't use glass before. And see how this *tough* glass can *replace* costlier materials in your products. Write for your free *Tuf-flex* booklet (T-F 8). Order from your nearest L·O·F Distributor. *®

Libbey·Owens·Ford Glass Co.,
93103 Nicholas Bldg.,
Toledo 3, Ohio

LOF GLASS PLASKON FIBER-GLASS
LIBBEY • OWENS • FORD GLASS COMPANY
For more details circle NED-169 K3 on enclosed inquiry slip

DRAG CHAIN
for operation in conveyor troughs

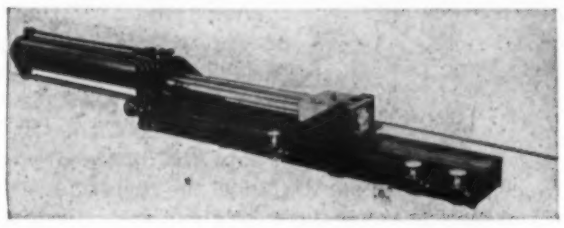
Combination class H drag chain for operation in conveyor troughs such as saw and paper mill refuse conveyors has cast block-type center links alternating with heavy steel sidebars, connected by large steel rivets. It is reported to have greater ultimate strength than comparable class H chain in which cast links are coupled consecutively. It is available in four sizes with 6 and 8-in. pitches, and operates with same sprockets and conveyor trough as corresponding size of regular class H drag chain. The chain has wear shoes projecting beyond and protecting the rivet heads and providing broad sliding surfaces, and can be turned over for extra life when one side is worn. Links are available in malleable iron or Promal, and rivets can be cadmium or zinc plated. Made by **Link-Belt Co.,** Dept. NED, 307 N. Michigan Ave., Chicago 1, Ill.



For more details circle NED-170 K3 on enclosed inquiry slip

BROACHING FIXTURE
air-powered unit is adaptable to wide range of machining operations

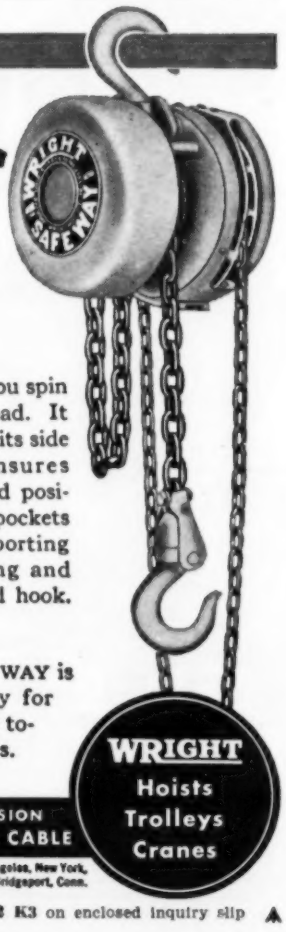
Featuring a 1400-lb broach pull capacity when operating on 80-psi air line pressure, this pneumatic broaching fixture is adaptable to wide range of machining operations including cutting holes, keyways and contours. Fixture consists of a cast iron base with two integral vertical flanges. A 5-in. air cylinder with a 25-in. stroke is mounted on flange at one end of base. Other flange in middle of base supports the work rest plate. Two hardened and ground steel guide bars guide the automatic broach puller mounted on the end of the cylinder rod.



Linear ball bushings in puller head guide holes assure long life and minimize friction loads. Four-way valve controls action of air cylinder travel through the action of three manually controlled pilot valves. Cycle time required to rough and finish broach close-tolerance hole in valve spool for tractor shown is 15 seconds. Rate of broach travel is adjustable. Broach centerline is 3½ in. above the work surface. Made by **National Broach & Machine Co.,** 5603 St. Jean Ave., Detroit 13, Mich.

For more details circle NED-171 K3 on enclosed inquiry slip

an ACCO product
NEW.. IMPROVED!
• Here's the new, improved WRIGHT SAFEWAY Hoist . . . made in sizes from ½ to 4 tons.



Many Features
Hand chain guard lets you spin chain to raise or lower load. It speeds operation and permits side pull. Refined brake insures smooth, easy lowering and positive braking. Five formed pockets in sheaves. All load supporting parts are steel. Rocking and swiveling drop-forged load hook.

Priced Right
The WRIGHT SAFEWAY is priced right. It will pay for itself in time saved. Write today for literature and prices.

ACCO
WRIGHT HOIST DIVISION
AMERICAN CHAIN & CABLE
York, Pa., Chicago, Denver, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.
WRIGHT Hoists Trolleys Cranes
For more details circle NED-172 K3 on enclosed inquiry slip

Handle Drums with Ease

...ON ALVEY CONVEYORS
You can simplify your drum traffic, eliminate dangerous and costly man-handling by putting drums on Alvey Conveyors.
Whether it's drums, bags, boxes, cartons, sacks—or any other packaged goods you are moving, it may pay you to call in an Alvey engineer. He will show you how Alvey is helping other companies like yours. No obligation, of course.
ALVEY CONVEYOR MFG. CO.
9259 Olive Street Road, St. Louis 24, Missouri
87A
ALVEY
BRANCH OFFICES IN PRINCIPAL CITIES
For more details circle NED-173 K3 on enclosed inquiry slip

SAVE TIME on GANG MILLING SET-UPS

Dayton Rogers *hardened and ground*, adjustable micrometer spacing collars are considered the last word on all types of milling machine set-ups for gang milling, straddle milling and similar operations. They are quickly and easily adjusted to the plus or minus positive adjustment. The collar is so designed that it gives the minimum over-all thickness with the maximum adjustment, graduated in .001"

They are stocked for cutter arbors from ⅝" to 2". You'll like the speed, the precision, and the time saved!

Write Today For More Information!

DAYTON ROGERS Manufacturing Company
2829 13th AVE. S.
MINNEAPOLIS, MINNESOTA
For more details circle NED-174 K3 on enclosed inquiry slip

KEEP AIR ACCURATE

AND CLEAN
with MASONEILAN AIR REDUCING VALVE AND FILTER

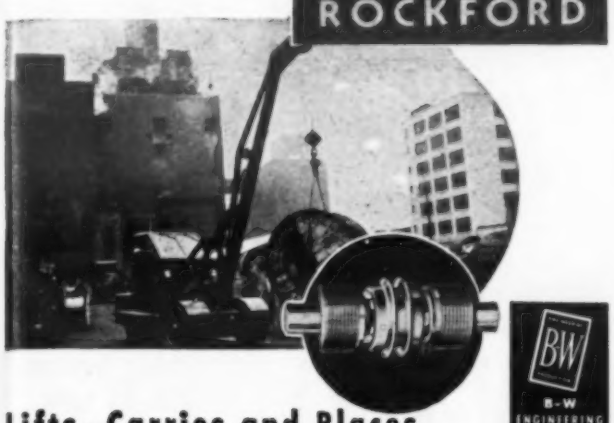
This Masoneilan pair provides all that's needed to keep operating air accurate and clean. Built for large capacity, minimum pressure loss and negligible maintenance, their extra-sturdy construction assures extra-years of dependable service.

For initial pressures up to 250 lbs. Reduced pressure 5 – 60 lb. – 60 – 100 lbs. Sizes ¼" to ½". Pressure gauge included. Sold separately or in combination.

Call your local Mason-Neilan Industrial Distributor for fast, dependable service.

MASON-NEILAN REGULATOR CO.
1189 ADAMS ST., BOSTON 24, MASS., U. S. A.
For more details circle NED-175 K3 on enclosed inquiry slip

CLUTCHES by ROCKFORD



Lifts, Carries and Places Any Size; Shape or Weight

KRANE CAR, built by Silent Hoist & Crane Company, picks up a load of any shape or size, up to ten tons, transports it and spots it accurately, smoothly and safely. ROCKFORD CLUTCHES control the power transmission from its one-man-operated single engine. Let ROCKFORD clutch engineers help with *your* power control problems.

B-W ENGINEERING MAKES IT WORK B-W PRODUCTION MAKES IT AVAILABLE ENGINEERING BULLETIN SENT ON REQUEST

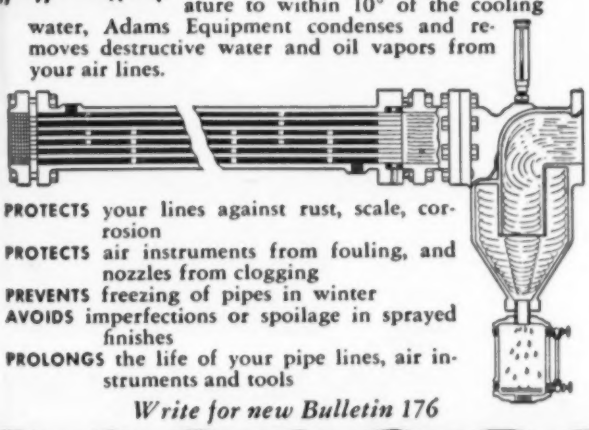
ROCKFORD CLUTCH DIVISION BORG-WARNER
312 Catherine Street, Rockford, Illinois, U. S. A.

▲ For more details circle NED-176 K3 on enclosed inquiry slip ▲

You Can be Sure of Clean Dry Air for your Compressed Air Tools with ADAMS Aftercooler and Cyclone Separator

3500 Gallons 1 YEAR'S water extraction from air lines equipped with Adams Aftercooler and Cyclone Separator.

● Reducing compressed air temperature to within 10° of the cooling water, Adams Equipment condenses and removes destructive water and oil vapors from your air lines.



PROTECTS your lines against rust, scale, corrosion
PROTECTS air instruments from fouling, and nozzles from clogging
PREVENTS freezing of pipes in winter
AVOIDS imperfections or spoilage in sprayed finishes
PROLONGS the life of your pipe lines, air instruments and tools

Write for new Bulletin 176

R.P. ADAMS CO., INC. 227 E. PARK DRIVE BUFFALO 17, N. Y.

▲ For more details circle NED-177 K3 on enclosed inquiry slip ▲

REDUCE ASSEMBLY TIME!

USE RELIANCE SPRINGTITES and SEMS

EASY TO USE • SPEEDS ASSEMBLY • ELIMINATES WASHER LOSS

SEND TODAY FOR FREE ENGINEERING BULLETIN S49

EATON

RELIANCE DIVISION
EATON MANUFACTURING COMPANY
OFFICES AND PLANTS • MASSILLON, OHIO
SALES OFFICES:
NEW YORK • CLEVELAND • DETROIT • CHICAGO
ST. LOUIS • SAN FRANCISCO • MONTREAL

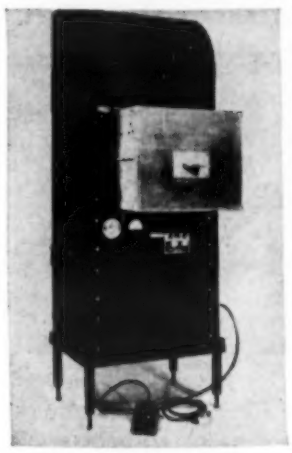
▲ For more details circle NED-178 K3 on enclosed inquiry slip ▲

AIRFRAME CONTROL BEARINGS have barrel-shaped rollers

High capacity, self-aligning series DSRP airframe control bearings have a full complement of barrel-shaped rollers, one-piece inner and outer rings, and efficient Plya-Seal. Hardened back-up rings provide positive shoulder stops at extreme misalignment, yet allow for a full 20-degree total misalignment. Made by **Fafnir Bearing Co.**, Dept. B, New Britain, Conn.

▲ For more details circle NED-179 K3 on enclosed inquiry slip ▲

INDUCTION HEATING UNIT for soft soldering, silver brazing



Designed specifically for soft soldering and silver brazing, model 5000 RF Heater has a circuit and output transformer arrangement permitting high no load circulating currents in the work coil. This causes rapid heating of small hard-to-load parts and also permits the use of single or half-turn work coils which the operator or work can safely touch during operation. This allows rapid loading and high production. Unit is adapted to such operations as sealing condenser cans and similar products where hermetic soldering is required. It has a rating of 5 kw output, an air cooled oscillator tube and requires ⅓-gallon cooling water per minute for the work coil. Made by **Radio Frequency Co.**, 46 Park St., Medfield, Mass.

▲ For more details circle NED-180 K3 on enclosed inquiry slip ▲

DO YOU KNOW? Two months still remain in the "Photocopy-in-Industry" contest which offers first, second and third prizes of extremely fine cameras. This contest is designed to focus attention on new and unusual applications of photocopying as a tool for economy or production in offices, factories and laboratories. Entries in remaining monthly contests close Nov. 10 and Dec. 10, 1953. Details are available from Peerless Photo Products, Inc., Dept. NED, Shoreham, L. I., N. Y.

▲ For more details circle NED-181 K3 on enclosed inquiry slip ▲

SAVE TIME & MONEY ON INSPECTIONS

Fine, Imported Instrument Available at 50% Saving

STEREO MICROSCOPE FOR INDUSTRIAL OR HOBBY USE

WIDE, 3 DIMENSIONAL FIELD

Excellent Depth for Working Under Magnification!

$160 Vol. *Only* $85.00 Pstpd.

Now, for the first time — a fine, imported Binocular Microscope at a substantial saving. Will pay for itself over and over in speeding, improving quality control. EDSCORP Stereo Microscope can be used for inspections, examinations, counting, checking, etc. Fixed 3 power objective with 3 pairs of matched eyepieces to give you powers of 15X, 30X, 45X. Rack and pinion focusing. Interpupillary adjustment. Instrument is removable from base for mounting on equipment or bench. Working distance — 2¾". Adjustable for extra height. Fine hardwood case included. Recommended for lab, shop, factory or home use. We guarantee complete satisfaction or your money back.

WE'LL SHIP ON 10-DAY TRIAL OFFER *Attach Coupon to Company Letterhead*

Edmund Scientific Corp., 306 E. Gloucester Pike, Barrington, N. J.
Please ship EDSCORP Stereo Microscope Stock No. 70,011-AE on 10-day Trial Offer
☐ Our check is enclosed in amount $85.00. ☐ Bill us on open account.
(It is understood Microscope can be returned within 10 days for full refund)
Name .....
Company .....
Address .....
City ..... Zone ..... State .....

▲ For more details circle NED-182 K3 on enclosed inquiry slip ▲

FIREPROOF MAINTENANCE-FREE

Ruberoid Stonewall *asbestos-cement* Board is ideal for interior or exterior construction . . . cuts building costs . . . saves maintenance expense. It is fireproof, water-resistant, rot-proof, rat-proof, rust-proof . . . never needs paint. It is strong and rigid, yet bendable and easy-to-work. Can be sawed or scored and broken to size. Takes nails readily.

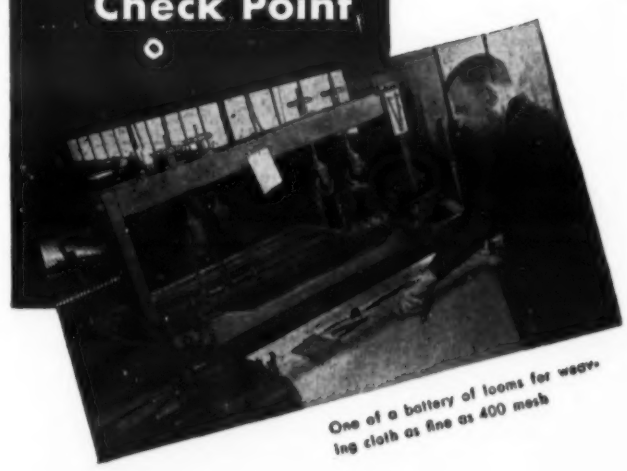
Use Stonewall Board for ducts, partitions, shower stalls, fire barriers, bins, exterior sheathing, arched roofs, etc. Write today for literature, cost and where to buy it. The Ruberoid Co., 500 Fifth Ave., New York 36, N. Y.

The RUBEROID Co.

ASPHALT AND ASBESTOS BUILDING MATERIALS

▲ For more details circle NED-183 K3 on enclosed inquiry slip ▲

An Important Wire Cloth Check Point



One of a battery of looms for weaving cloth as fine as 400 mesh

Weaving Precision

Our skilled workmen and precision looms combine to make precision wire cloth that meets the most rigid specifications. All shute wires are parallel and all warp wires are parallel as they must be, to assure a uniformly woven cloth with no defects. One or two open spots in a wire cloth could completely spoil the most painstaking screening operation.

In addition to its uniformity and freedom from imperfections, Newark Wire Cloth is noted for accurate mesh counts. Available in all the commercially used metals, Newark Wire Cloth is woven in sizes ranging from 4 inches (space cloth) down to 400 mesh.

We maintain a large stock of the commonly used metals and sizes, and are in a position to make prompt shipments. Let us quote on your requirements. When writing, please give us details on your process.

Send for our New Catalog E.

NEWARK for ACCURACY

Newark Wire Cloth COMPANY

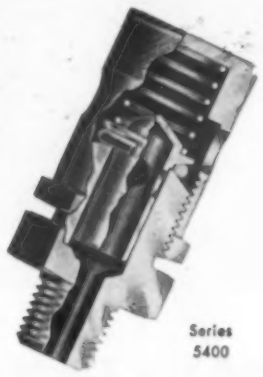
351 VERONA AVENUE • NEWARK 4, NEW JERSEY

▲ For more details circle NED-184 K3 on enclosed inquiry slip ▲

At Last!

A Relief Valve that DOESN'T LEAK

for pressures from .75 to 100 psi



Features: An extremely precise, adjustable, low-pressure pop-off relief valve providing "dead-tight" sealing up to the cracking pressure—quick reseat with zero leakage. Available in five pressure ranges.

Design: Incorporates "Circle-Seal" principle employing a standard, resilient "O" ring self-aligning between conical seats of a poppet type valve. Standard "O" ring is used for very low pressures. For higher pressures the "O" ring is supplied with a metal "back-up" ring.

Construction: Aluminum or brass in standard design; stainless steel to order. Connection sizes 1/8" or 1/4" male pipe, standard; 7/16"-20 or 9/16"-18 straight thread, to order.

Service: For controlling gases safe to release into the atmosphere in systems where leakage cannot be tolerated or is undesirable for reasons of economy. Temperature range: −40°F to 280°F, standard; −80°F to 400°F, to order.

Engineering Data Free on Request.

Another CIRCLE SEAL precision valve

JAMES-POND-CLARK
2181 E. Foothill Blvd. • Pasadena 8, Calif.

For more details circle NED-185 K3 on enclosed inquiry slip

the most widely used Electronic Supply Guide

free

ALLIED'S COMPLETE 268-PAGE 1954 CATALOG

Send for it

World's Largest Stocks of ELECTRONIC SUPPLIES FOR INDUSTRY

Simplify and speed your purchasing of electronic supplies and equipment. Send your orders to us for quick shipment from the world's largest stocks of special-purpose electron tubes, test instruments, audio equipment, electronic parts (transformers, capacitors, controls, etc.). Our expert Industrial supply service saves you time, effort and money. Send today for your Free ALLIED Catalog—the complete, up-to-date guide to the world's largest stocks of Electronic Supplies for Industrial use.

One complete dependable source for everything in electronics

ALLIED RADIO
100 N. Western Ave., Dept. 37-K-3
Chicago 80, Illinois

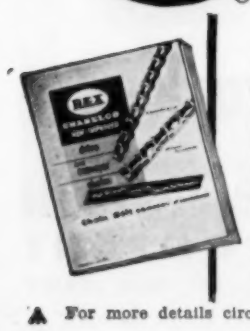
For more details circle NED-186 K3 on enclosed inquiry slip

WANT A BETTER CHAIN?

FOR DRIVES
FOR CONVEYORS

This new booklet presents the complete story of the new Rex R, RX and RR series Chabelco® Drive and Conveyor Chains. It explains how these improved chains can give *you* more for your chain dollar. Send for your copy of Bulletin 53-59 today!

REX® CHAIN BELT COMPANY OF MILWAUKEE



CHAIN BELT COMPANY 53-108
4686 W. Greenfield Ave.
Milwaukee 1, Wis.
Gentlemen:
Please send me Bulletin 53-59.
Name.....
Company.....Dept.....
Address.....
City.....State.....

For more details circle NED-187 K3 on enclosed inquiry slip

SAFETY DIP TANK
has self-closing hinged cover

Waist high for use without bending, this dip tank for washing castings, parts and other moderate size parts features fire preventive construction and opens by foot treadle. It is made of terne plate which is electrically seam welded into a "one-piece" unit and is mounted on a braced and welded angle iron frame. Hinged cover is self-closing and tank remains closed to protect the cleansing solvent from fire, contamination and evaporation. Tank measures 24¾ x 13 x 8¾ in. and stands 33 in. high. Made by **Protectoseal Co.**, 1966 S. Western Ave., Chicago 8, Ill.

For more details circle NED-188 K3 on enclosed inquiry slip

SHELF RACK
useful for handling sheet materials

Particularly adapted to stacking flat and book paper by skids, cases, cartons and reams, this Intermediate Shelf Rack is also suited to storage of other kinds of sheeting. Channeled top members bolt to square tubular steel end frames, which have bolt holes at an intermediate level to allow for shelf installations. This makes possible full use of space without placing excessive weight on unboxed materials. Standard units are designed for handling sheets up to 22½ x 35 in. in size, and have floor plates which distribute load and can be used for bolting down if desired. Made by **Equipment Mfg., Inc.**, 21566 Hoover Rd., Detroit 5, Mich.

For more details circle NED-189 K3 on enclosed inquiry slip

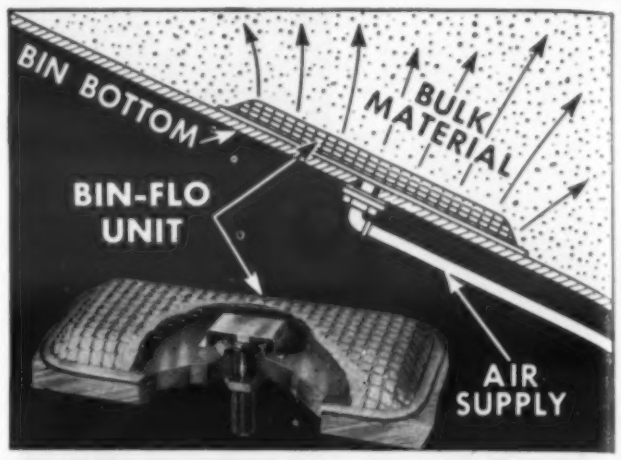
DO YOU KNOW? "Piercing the Unknown" is a 16-mm sound-color motion picture that can be borrowed without cost and that traces the development of computing devices up through the latest electronic "brains". Film shows how computers solve design, ballistics, chemistry, nuclear physics and other problems in the fields of pure and applied science in hours instead of in years. Use of Computers in business and industry is explained. To book film, write Dept. of Education, International Business Machines Corp., Endicott, N. Y.

For more details circle NED-190 K3 on enclosed inquiry slip

REMEMBER
to inquire about those
HIGHLY EFFICIENT
Sta-Warm **COMPOUND MELTERS**

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO

For more details circle NED-191 K3 on enclosed inquiry slip



BIN-FLO USES SMALL VOLUME OF AIR AT LOW PRESSURE

KEEPS BULK MATERIALS MOVING

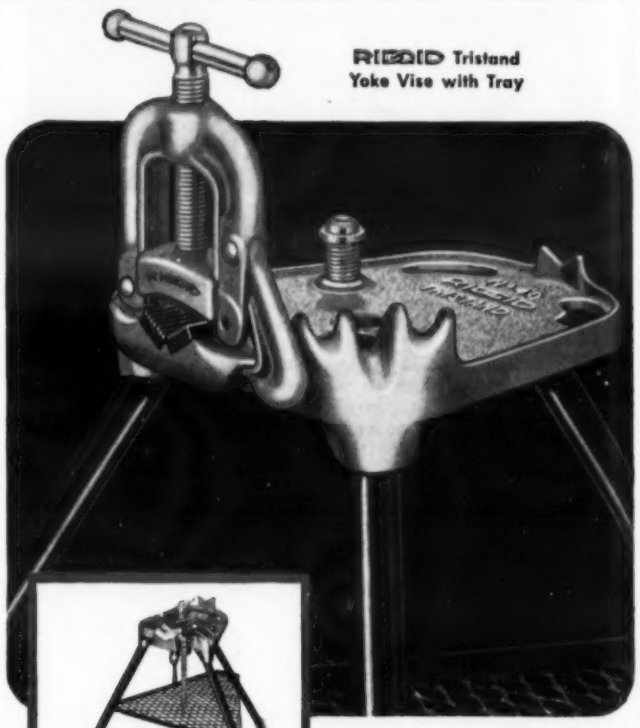
BIN-FLO units in bins, chutes, hoppers, etc., restore flow characteristics to dry, finely ground materials which tend to pack or bridge in storage. Types for all materials and conditions. No moving parts; simple installation; negligible operating cost; no maintenance cost.

BIN-DICATOR bin level indicator—"The Eyes of the Bin"—automatically reports levels of materials in storage; automatically controls filling machines; prevents waste.

NEW 20-PAGE BOOK FREE

THE BIN-DICATOR CO.
13946-A Kercheval • Detroit 15, Mich.

For more details circle NED-192 K3 on enclosed inquiry slip



The vise that's a handy portable workbench

RIDGID

New No. 40 Tristand Pipe Vise

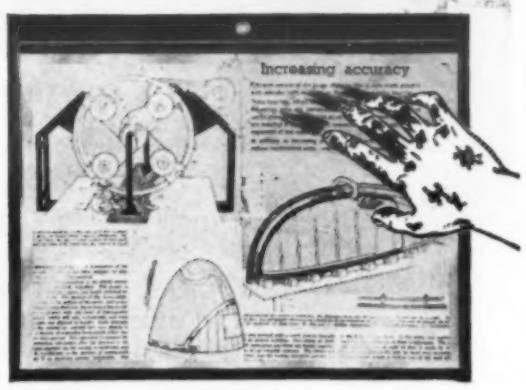
Easily taken to the job—legs fold in and chain for carrying, tray quickly on and off. Roomy top has pipe rest and efficient benders; tray keeps tools handy—and also makes Tristand extra rigid, won't fold up in use! Tool-steel Longrip jaws—firm grip but easy on polished pipe and tubing. Yoke No. 40, (old TSY-2½) 2½"; chain No. 45 (old TSC-4) 4". Buy these handy worksavers at your Supply House.

THE RIDGE TOOL COMPANY • ELYRIA, OHIO • U.S.A.

RIDGID
Work-Saver Pipe Tools

For more details circle NED-193 K3 on enclosed inquiry slip

Don't take Chances..



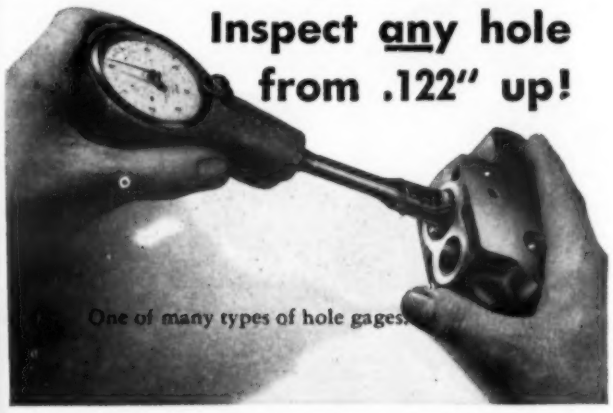
Send for FREE Sample Today

KLEER-VU acetate safety envelopes keep your production orders, charts, blueprints and other important factory papers crisp and clean, despite constant handling. Used by thousands of large and small plants. Make the test yourself . . . at our expense. Send for FREE sample and catalogue today.

AMERICAN KLEER-VU PLASTICS, INC.

53-04G Grand Ave. Maspeth 78, N. Y.

For more details circle NED-194 K3 on enclosed inquiry slip

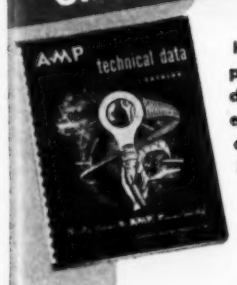


WHATEVER THE HOLE CONDITION — whether the hole is deep, shallow, wide or narrow, whether it's tapered, bell-shaped, irregular, or necked — Federal Indicating Gages will check it positively, accurately, and quickly. Our line of Indicating Gages is *complete* and we can recommend a modern gage to exactly fill your needs. Write today for catalog and tell us your requirements. Federal Products Corp., 1710 Eddy Street, Providence 1, R. I.

FEDERAL
Largest manufacturer of indicating type gages . . . exclusively

For more details circle NED-195 K3 on enclosed inquiry slip

NEW AMP TECHNICAL CATALOG of SOLDERLESS WIRING!

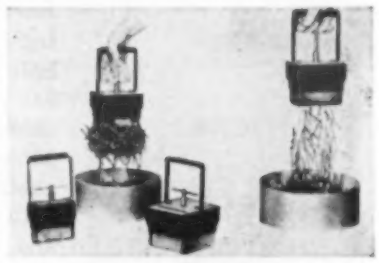


Here, for the first time, is a complete 78 page catalog of technical information devoted solely to *solderless wiring*. AMP's engineering and research facilities are outlined together with test data covering altitude, corrosion, comparative resistance, low currents, radio and audio frequencies, etc. Actual case studies are included which give savings in time and labor in typical applications. Send for your catalog today!

AIRCRAFT-MARINE PRODUCTS INC.
2100 PAXTON STREET, HARRISBURG, PA.
AMP Trade-Mark Reg. U. S. Pat. Off.

For more details circle NED-196 K3 on enclosed inquiry slip

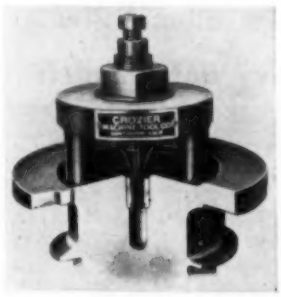
PICKUP TOOL
for use with small ferrous parts



Used for pick-up of small parts, metal scrap, nails and other ferrous materials, 70-series Multilift Magnetool utilizes a permanent magnet for pick-up and has provision for instant release by simply squeezing handle. Improvements over previous models include elimination of protruding shelves, greater capacity and better dust and water-proofing. All units are 5½ in. long and 8 in. high. Three widths are available, with pick-up capacities ranging between 3 and 9 lb. Made by **Multifinish Mfg. Co.**, Magnetool Div., Dept. 457, 2114 Monroe Ave., Detroit 7, Mich.

For more details circle NED-197 K3 on enclosed inquiry slip

BUSHING EXTRACTOR
kit covers holes from ¼ to ¾ in.



Consisting of ten threaded expanding arbors, draw table, and nut and an antifriction washer, this kit for extracting bearings and bushings will handle extraction from any hole between ¼ and 25/32-in. ID. Unit withdraws bearings without damaging equipment from which they must be separated, and is complete with steel carrying case and with either a complete or partial set of expanding arbors as desired. Made by **Crozier Machine Tool Co.**, Prairie Ave., Hawthorne, Calif.

For more details circle NED-198 K3 on enclosed inquiry slip

VACUUM DRYERS
two models available

Model 2-B and 4-B Dryset vacuum dryers, both electrically operated devices, bring about fast drying and cool operation of garment presses. Model 2-B measures 14⅛ x 27 13/16 in., has a ¼-hp motor and will handle two presses. Other model is 18 3/16 in. diameter and 15 15/16 in. high, is equipped with a ½-hp motor and has a four-press capacity. Made by **Lamson Corp.**, Lamson-Billmyre Div., Dept. C-18, Syracuse 1, N. Y.

For more details circle NED-199 K3 on enclosed inquiry slip

WICKWIRE ROPE SLINGS

in braided and single part construction

Braided slings made by Wickwire give you these advantages:

- Extreme flexibility
- Non-kinking properties
- Better conformation to irregular surfaces
- More even load distribution
- Will not take a permanent set

Write or call our nearest sales office for full details.

THE COLORADO FUEL AND IRON CORP.—Abilene (Tex.) • Denver
Houston • Odessa (Tex.) • Phoenix • Salt Lake City • Tulsa
PACIFIC COAST DIVISION—Los Angeles • Oakland
Portland • San Francisco • Seattle • Spokane
WICKWIRE SPENCER STEEL DIVISION—Boston • Buffalo • Chattanooga
Chicago • Detroit • Emlenton (Pa.) • Philadelphia • New Orleans • New York

WICKWIRE ROPE
PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION

1348

For more details circle NED-200 K3 on enclosed inquiry slip

PURE WATER
DISTILLED WATER?

PROBLEMS SOLVED WITH Barnstead EQUIPMENT

DEMINERALIZED WATER?

In hundreds of manufacturing processes, where complete purity is needed, Barnstead Stills provide the highest-quality, lowest-cost, chemically pure, sterile water from ½ to 1000 gallons per hour. With over 100 different models to choose from, Barnstead can provide the exact still to fit your particular needs. For Barnstead Laboratory and Industrial stills are the proven standard of the scientific and industrial world.

Where modern manufacturing processes require only high-test mineral-free water, Barnstead Demineralizers are the best producers . . . 5c per 1000 gallons with a minimum of supervision and maintenance. Many new industries are turning to Barnstead Demineralized Water for greater production, fewer rejects and better quality control.

WRITE

Catalog #123 gives both sides of the Pure Water Picture. Since Barnstead makes both stills and demineralizers, you'll find this catalog complete, authoritative, unbiased. Write Today!

First in Pure Water since 1878

Barnstead STILL & STERILIZER CO.

16 Lanesville Terrace, Forest Hills, Boston 31, Mass.

For more details circle NED-201 K3 on enclosed inquiry slip

ANOTHER ADHESIVE PROBLEM SOLVED WITH Pliobond

PLIOBOND provides unparalleled bond between steel, rubber and pile, meeting rail and the upper glass of the Quincy Crystal Glide Combination Window. Photo courtesy Hess Manufacturing Co., Quincy, Pa.

Gives Lifetime, Glass-to-Steel Bond on Lifetime Combination Windows

"Only adhesive we have found satisfactory," is how Hess Manufacturing Co., maker of quality storm windows, describes PLIOBOND—Goodyear's thermoplastic adhesive that "bonds anything to anything."

PLIOBOND is used to bond the steel meeting rail directly to the glass of the upper pane of these otherwise rimless windows. It must give a permanent bond—one that fully resists sun and water, heat and cold for the life of the window. And it does.

PLIOBOND can be the quick, positive answer to your tough assembly problems, too. Its strong, flexible bonds are easily made, yet defy the effects of time, chemicals, water and oils, or physical stress and strain. For full details, write to:

Goodyear, Chemical Division, Akron 16, Ohio

CHEMICAL GOODYEAR DIVISION

Use-Proved Products
CHEMIGUM • PLIOBOND • PLIOLITE • PLIOVIC • WING-CHEMICALS
The Finest Chemicals for Industry

Chemigum, Pliobond, Pliolite, Pliovic—T. M.'s The Goodyear Tire & Rubber Company, Akron, Ohio

For more details circle NED-202 K3 on enclosed inquiry slip

Self-Locking Self-Sealing

LOK-THRED

IN ANY SIZE STUD, BOLT OR SCREW

LOK-THRED can end the difficulties you may be having with involuntary loosening of fasteners ... leakage of lubricants or other fluids via ordinary threads ... or even a combination of both.

LOK-THRED *seals as it locks* ... reforms the receiving thread into an intimate metal-to-metal contact with itself to eliminate every void between the mating threads.

LOK-THRED *can't shake loose,* either ... actually becomes tighter in service when it is subjected to severe vibration and jarring. Yet, it is fully re-usable ... requires no selective fits ... can be used with ordinary tools.

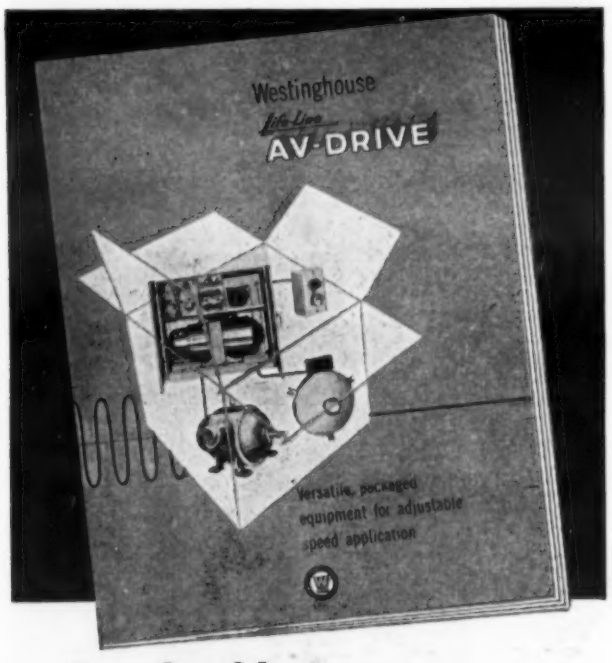
Write today for National's booklet containing complete engineering and application data.

Why not take a detailed look at all the features of LOK-THRED ... National offers LOK-THRED in all sizes of studs, bolts or screws.

National PRODUCTS

THE NATIONAL SCREW & MFG. CO.
2440 East 75th St. • Cleveland 4, Ohio

▲ For more details circle NED-203 K3 on enclosed inquiry slip ▲



Free booklet tells how to save with adjustable voltage drives

With this practical booklet in hand, you have full information on the economy, convenience and versatility of Life-Line* AV Packaged Drives. You'll learn how these compact units provide on-the-spot power conversion thereby eliminating long runs and intricate networks of d-c feeders. The many other advantages gained from precise regulation of d-c motors from an a-c source are clearly presented.

One section describes how the AV Packaged Drive operates. It shows front, rear and side views and labels all standard components for easy identification. Also covered are construction features that assure long, dependable operation from your packaged drive.

Included are typical applications showing how AV Packaged Drives bring precise, versatile control to over-all industry.

For your free copy of AV-Drive booklet, B-5808, write to Westinghouse Electric Corporation, P.O. Box 868, Pittsburgh 30, Pennsylvania. J-21782

*Trade Mark

YOU CAN BE SURE ... IF IT'S Westinghouse

▲ For more details circle NED-204 K3 on enclosed inquiry slip ▲

PRESSURE TESTING MACHINES
spot casting and assembly leaks

For detecting and locating leaks in castings and hollow assemblies, vertical pressure testing machines subject parts to a 10-second automatic check. Parts are charged with given volume of air and any leaks indicated by signal lights. Machine illustrated tests rifle grenade assemblies, and has four stations, two of which are loaded and unloaded while parts on the other two are being checked. Three signal lights at each station show results of the test. Machine operates from an 80 psi air source and a 110-v line. Complete cycling time for two parts is 17 seconds. Made by **Hautau Engineering Co.**, 721 Wanda, Ferndale 20, Mich.

▲ For more details circle NED-205 K3 on enclosed inquiry slip ▲

INDUSTRIAL SCALES
from bench to heavy duty models

A full range of industrial scales from bench to heavy duty motor truck models has just been announced. Increased precision over former line results from the use of one piece sectors in the full-floating double pendulum mechanism. Indicating heads can be installed to face in any of eight directions, or are also available swiveling through 360 degrees. All models have increased scale dimensions and are at the same time smaller overall, while the heavy duty units now have up to nine unit weights available in standard combinations, as compared to four previously. A gray finish is used, while tare and capacity beams are stainless steel with chrome plated brass poises. Made by **Toledo Scale Co.**, Telegraph Rd., Toledo 1, O.

▲ For more details circle NED-206 K3 on enclosed inquiry slip ▲

DO YOU KNOW? A new form of mineral, not found in nature, with a hardness comparable to garnet or topaz has been produced in the laboratory. Developed by Loring Coes, Jr., this crystallized silica is still in the developmental stage and the commercial possibilities have not been explored as yet. Mr. Coes is assistant research director of Norton Co., 200 New Bond St., Worcester 6, Mass.

▲ For more details circle NED-207 K3 on enclosed inquiry slip ▲

AERO-SEAL WORM-DRIVE HOSE CLAMPS

WON'T SHAKE LOOSE!

Wherever you have to clamp a hose connection tight ... or wherever you want to lock two objects of any shape together in an unshakeable bond ... your best bet is AERO-SEAL.

Threads of steel worm engage deep into slots in stainless steel band — hold tight under extreme vibration in automotive, aircraft and industrial applications. CAN'T SHAKE LOOSE.

One-Hand Installation
Install an Aero-Seal any place you can reach with thumb and one finger. Self-feeding when band engages worm threads. Thumb-grip and screwdriver types.

Re-use Again and Again
When hose is worn you RE-USE the same Aero-Seal again and again. RE-USE Aero-Seals on temporary clamping jobs—they conform to any shape without damaging band.

Use of stainless steel subject to government regulations

"Aero-Seal"® WORM DRIVE HOSE CLAMPS

ANOTHER BREEZE MARK PRODUCT

BREEZE CORPORATIONS, INC.
41 South Sixth St. Newark, N. J.

▲ For more details circle NED-208 K3 on enclosed inquiry slip ▲

Now a Better Welder
AT A LOWER PRICE

Surewelds A-C Shop Welder
improved in many ways

The Sureweld A-C Shop Welder, for general utility welding, has always been outstanding for the remarkable arc stability it has provided, the desirable welding characteristics at all current levels and the operator's control of current value.

And now this welder has been greatly improved. The exclusive Sureweld 4-coil transformer has been positioned horizontally for even better ventilation and cool operation even with higher output. Primary insulation and secondary windings provide high dielectric strength for peak performance at high heats. Operator's convenience has been increased by side-mounting the control handle next to the high-visibility calibrated scale. Other advances markedly decrease KVA input and increase ease of operation, dependability and portability. Best of all, the improved design has resulted in lower prices.

Send for descriptive bulletin NH-101 today.

Copyright 1953, National Cylinder Gas Company

NCG NATIONAL CYLINDER GAS COMPANY
840 N. Michigan Avenue, Chicago 11, Ill.

▲ For more details circle NED-209 K3 on enclosed inquiry slip ▲

A NEW SIZE!
43 H.P.

DODGE TORQUE-ARM
Speed Reducer

Here is the new "big brother" of the famous Dodge Torque-Arm family. Double reduction—43 hp capacity—output speeds from 12 to 110 rpm. Rugged, dependable, economical. No special engineering required, no expensive installation. Driven through any V-belt drive—stock Taper-Lock sheaves prescribed for desired speeds. Backstop available if desired. Write for special Torque-Arm bulletin and information about new Dodge Tri-Matic Overload Release.

DODGE MANUFACTURING CORPORATION, 2100 Union St., Mishawaka, Ind.

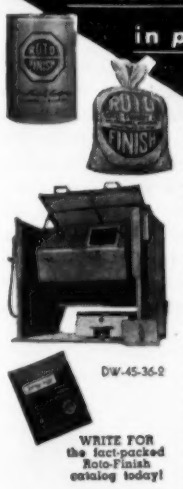
DODGE
of Mishawaka, Ind.

▲ For more details circle NED-210 K3 on enclosed inquiry slip ▲

it's the finish that counts!

Roto-Finish CHIPS AND COMPOUNDS ARE FIRST
in economy — in quality —
in performance

ROTO FINISH



Roto-Finish chips and compounds are carefully manufactured to fit your specific needs by the company that originated the Roto-Finish processes. They're specially designed to give the best results— faster — economically

SAVE MANHOURS AND MONEY by eliminating hand finishing. GIVE ABSOLUTE UNIFORMITY ... in any quantity. MAINTAIN PRECISION TOLERANCES. CUT FINISHING costs as much as 80%. LOWER INITIAL AND MAINTENANCE costs.

THE ROTO-FINISH PROCESS puts grinding, deburring, descaling, polishing, britehoning and coloring on a MASS PRODUCTION BASIS. Put the experience and facilities of Roto-Finish to work for you on YOUR SPECIAL FINISHING PROBLEMS.

DW-45-36-2

WRITE FOR the fact-packed Roto-Finish catalog today!

Roto-Finish COMPANY
associated with The Sturgis Products Co.
3702 Milham Rd., Kalamazoo, Mich., P. O Box 988, Ph. 3-5578
ORIGINATORS OF THE ROTO-FINISH PROCESS

▲ For more details circle NED-211 K3 on enclosed inquiry slip ▲

THE Surest WAY TO FIND HIDDEN STRAY METAL

NEW USERS of Allis-Chalmers electronic Metal Detectors are usually surprised at the large number of pieces of stray metal detected in their packages. A typical comment is "It's a wonder we have any customers left."

Fortunately not all stray metal causes injury. And in most cases the customer never writes in about it. But your reputation suffers! Precautions lessen the problem, but the surest way to catch hidden stray metal — magnetic or non-magnetic — is with an Allis-Chalmers electronic Metal Detector. Metal particles .047 inch diameter and larger are detected.

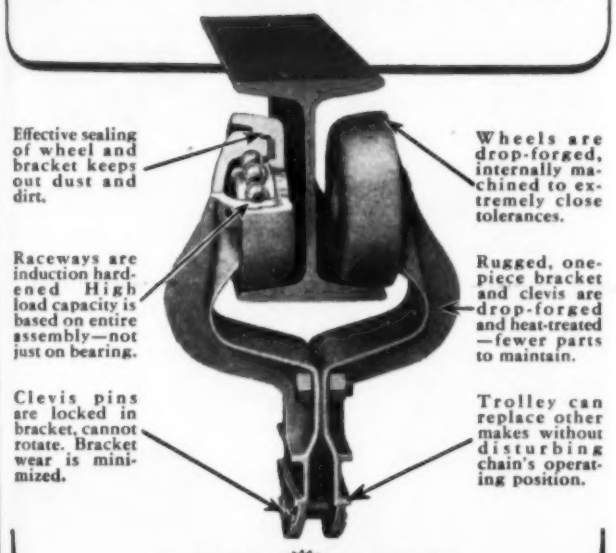
Call your nearby Allis-Chalmers Sales Office for 20 page bulletin 7217, which shows the many ways of applying A-C electronic Metal Detectors. A-3080

Allis-Chalmers
Milwaukee 1, Wis.

ALLIS-CHALMERS

For more details circle NED-212 K3 on enclosed inquiry slip

Your conveyor dollars go farther with LINK-BELT trolleys



LINK-BELT

LINK-BELT COMPANY: Chicago 8, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8. 12,385

Write for Folder 2241-B.

For more details circle NED-213 K3 on enclosed inquiry slip

Better Welding

Heat... up & down slope

Improved non-synchronous performance with Square D's NEW SLOPE CONTROL

BETTER AND MORE PROJECTION WELDS through more uniform distribution of welding current.

PERMITS WELDING NON-FERROUS METALS. Reduced "spitting" at electrodes improves appearance of aluminum and other non-ferrous welds—extends electrode life.

DESIGN FEATURES

Matched Enclosures. Slope Control enclosure matches Square D Non-Synchronous Welder Controller (Nema N2), shown at right. Also matches individual Square D welding timer or contactor enclosures.

Simplified Circuit, standard components, and heavy-duty construction.

Write for Bulletin 8990 EWG. Address Square D Company, 4041 North Richards Street, Milwaukee 12, Wisconsin.

SQUARE D COMPANY

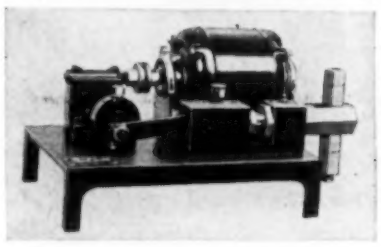
For more details circle NED-214 K3 on enclosed inquiry slip

SUBZERO TEST CABINET designed for laboratory work

Of module design, this small subzero test cabinet is particularly suited for petroleum work. Module arrangement permits use of a combination of any number of units for desired temperature ranges. Temperature control is provided by an independent refrigeration and control system. This 0.8-cu ft cabinet is available in four temperature ranges down to −100°, −60°, −30° and 0° F. It is mechanically - refrigerated and self-contained. Chamber interior is stainless steel. Made by **Refrigeration Systems, Inc.,** Hudson Bay Div., 646 W. Washington Ave., Chicago 6, Ill.

For more details circle NED-215 K3 on enclosed inquiry slip

CONTROLLED VOLUME PUMPS will handle wide range of products



With liquid capacities as low as 3 milliliters an hour to 50 gpm against pressures to 20,000 psi, CC controlled volume pumps will deliver exact quantities of a very wide range of fluids regardless of changes in discharge pressure. They are available in any material and will handle such difficult materials as suspended solids, abrasives, corrosives, chemicals and volatile or hot liquids and liquefied gases. Stroke is adjustable for changing volume of delivery. Applications include continuous process work in chemical plants; in boiler feed water, sewage and industrial water treatment; in blending and formulating operations; and in automatic flow control. Both multiple and single units are available. Made by **Clark Cooper Co.,** CC Pump Mfg. Div., Market & Madison Sts., Palmyra, N. J.

For more details circle NED-216 K3 on enclosed inquiry slip

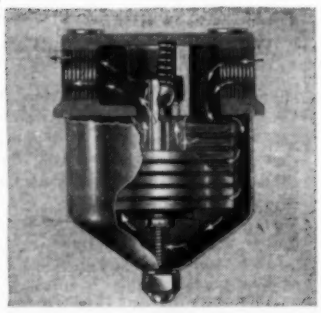
DO YOU KNOW? New power brushing methods for removing burrs and blending surface junctures of jet engine parts and large gears will be demonstrated at the National Metals Exposition in Cleveland's Auditorium, Oct. 19-23, 1953. Machines developed for utilizing these production techniques will be in operation. Equipment and methods are to be shown by Osborn Mfg. Co., 5403 Hamilton Ave., Cleveland 14, O.

For more details circle NED-217 K3 on enclosed inquiry slip

Two AIR-MAZING ways to keep dirt out of your hydraulic systems

1 AIR-MAZE BREATHER FILTERS for hydraulic system vents keep out airborne dust and dirt. Oil-wetted wire baffles trap the dust, also act as efficient backfire flame and spark arrester. All metal, cleanable, vibration-proof filter media. Wide range of types and sizes.

2 AIR-MAZE LIQUID FILTERS are permanent, all-metal, cleanable. Many times more effective filtering area than in conventional cylindrical filter cartridges. Special screen media available in various mesh sizes. Capacities range from 1.7 gpm to 720 gpm.



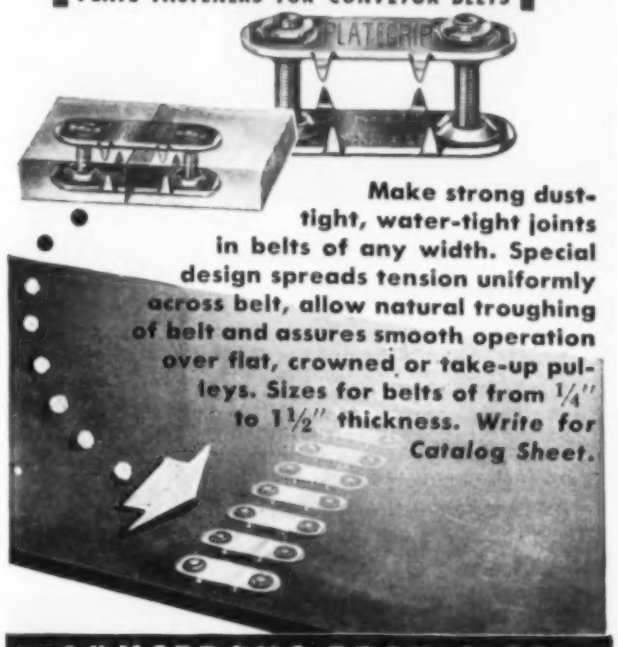
FREE BOOKLETS! Write today for copies of new booklets on Air-Maze liquid filters and Air-Maze breather filters.

AIR-MAZE CORPORATION
25001 Miles Rd. • Cleveland 28, Ohio

For more details circle NED-218 K3 on enclosed inquiry slip

PLATEGRIP

PLATE FASTENERS FOR CONVEYOR BELTS

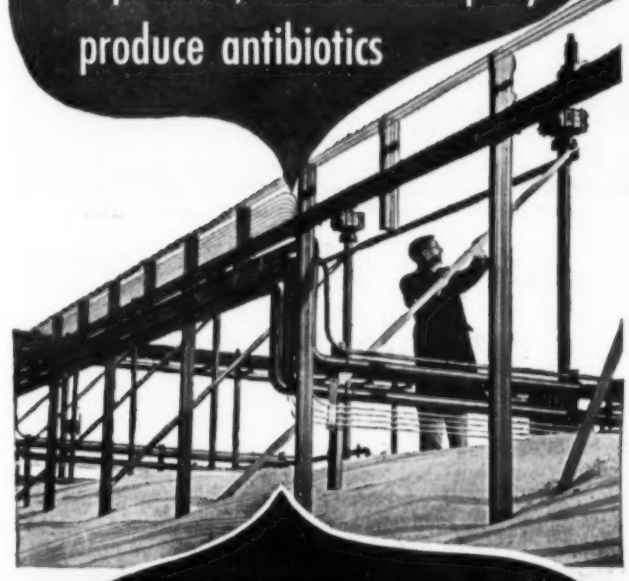


Make strong dust-tight, water-tight joints in belts of any width. Special design spreads tension uniformly across belt, allow natural troughing of belt and assures smooth operation over flat, crowned or take-up pulleys. Sizes for belts of from 1/4" to 1 1/2" thickness. *Write for Catalog Sheet.*

ARMSTRONG BRAY & CO.
5362 Northwest Highway • CHICAGO 30, U.S.A.

For more details circle NED-219 K3 on enclosed inquiry slip

More than 4 miles of ALCOA Aluminum Tubing help Parke, Davis & Company produce antibiotics



ALCOA UTILITUBE—*more than four miles of it*—connects outdoor tanks with gages at Parke, Davis & Company's new Chloromycetin plant at Holland, Michigan—the world's only plant producing antibiotics by chemical synthesis. Alcoa's all-purpose aluminum coiled tube is used for instrument line service at this 124,000-gallon tank farm.

Alcoa Utilitube offers savings up to 40% over copper . . . has excellent on-the-job forming and flaring properties. It is available in economical, long lengths up to 1,000 feet or more, depending on size. It stands up well under vibration . . . has high resistance to most industrial atmospheres and to many liquids and gases.

In petroleum service, Alcoa Utilitube will not form sludge or gum . . . will not discolor or contaminate the fluid it carries.

Use Alcoa Utilitube for:

- Air for pneumatic and hydraulic control circuits
- Gasoline and fuel oil for internal combustion engines.
- Lubricating oils for engines and machines.
- Fluids for hydraulic systems.

For complete details, write for the new booklet: *Alcoa Utilitube.*

ALUMINUM COMPANY OF AMERICA
1002-K Alcoa Building, Pittsburgh 19, Pa.

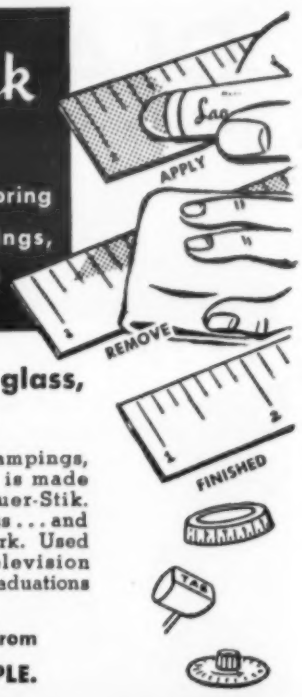
Alcoa Aluminum

ALUMINUM COMPANY OF AMERICA

For more details circle NED-220 K3 on enclosed inquiry slip

Lacquer-Stik

a Wipe-on for quick permanent coloring of stampings, engravings, symbols and designs



For use on metal, glass, ceramics, plastics

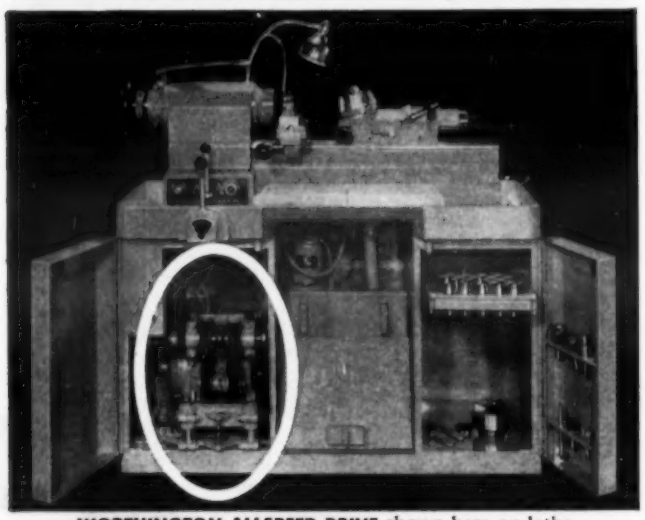
Permanent marking of stampings, engravings and designs is made easy by the use of Lacquer-Stik. Just apply—wipe off excess . . . and you have a permanent mark. Used for marking radio and television dials, knobs on stoves, graduations on instruments, etc.

8 colors to choose from

WRITE FOR SAMPLE.

LAKE CHEMICAL CO.
LACO BRAND
3053 W. Carroll Avenue, Chicago 12, Illinois

For more details circle NED-221 K3 on enclosed inquiry slip



WORTHINGTON ALLSPEED DRIVE shown here on lathe

. . . Lets you select the correct speed for every job

Worthington's Allspeed Drive, easily installed on your present machinery, permits quick, accurate selection of the proper speed for every material and job.

Infinitely variable speed changes are easily made on the Worthington Allspeed Drive by moving the speed control handwheel. Precise setting is indicated on a conveniently located dial. Allspeed Drives may also be operated by controls on the equipment in which they are installed. Power is transmitted through a mechanically adjustable tandem V-belt arrangement which provides stepless speed variations over whatever range you need.

Mountable in any position. Runs in either direction. Life-lubricated bearings throughout. All rotating parts fully machined and balanced. Automatic belt tensioning with no operative spring. Available in skeleton form, with cover or with built-in motor. For information on the applications, capacities, dimensions, installations and specifications on the Worthington Allspeed Drive, send this coupon today.

ALLSPEED MOTOR DRIVES with exclusive two-belt design give you complete speed variation and an extremely compact unit for easy installation.

WORTHINGTON AS.3.5

WORTHINGTON CORPORATION
Oil City, Pennsylvania

Please check one:
( ) For reference
( ) For immediate project

( ) Please send Bulletin AS-1600-B6 on Worthington Allspeed Motor Drives.
( ) Bulletin AS-1600-B3 on Worthington Standard Allspeed Drives without motors.

NAME .....
ADDRESS .....
CITY ..... ZONE ..... STATE .....

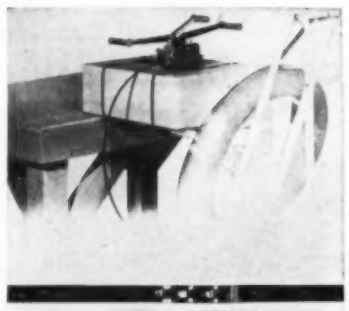
For more details circle NED-222 K3 on enclosed inquiry slip

UNIVERSAL JOINT DRILLHEAD has 16-spindle in-line drive

Built to meet customers' requirements, this 16-spindle, straight-in-line drive, adjustable drill head has an individual spindle adjustment range within 1½ in. of respective driving points. Drilling capacity of each spindle is ¼-in. in cast iron. Universal joints permit adjustment of spindles. Made by **Thriftmaster Products Corp.**, 1010 N. Plum St., Lancaster, Pa.

For more details circle NED-223 K3 on enclosed inquiry slip

STEEL STRAPPING METHOD eliminates use of seals



By effecting a mechanical interlocking joint of two overlapping lengths of steel strapping that tests consistently at between 77 and 86 per cent of the strength of the strapping itself, Inland Seal-Less strapping machine offers both simplicity and economy of operation. In two operations, machine tensions the strapping, cuts it to exact required length, and makes the mechanical seal. Coil holders and strapping table dispensers are available for use with the unit in both floor and stand types. Dispensers accommodate standard 100-lb coils. Made by **Inland Wire Products Co.**, Dept. NED, 3947 S. Lowe Ave., Chicago 9, Ill.

For more details circle NED-224 K3 on enclosed inquiry slip

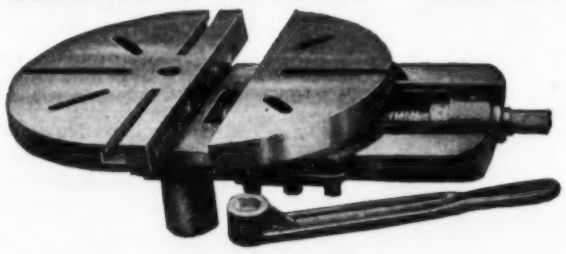
SAFETY RELIEF VALVE available in sizes 1½ through 6 in.

Available in sizes from 1½ through 6 in., Uni-Line series 41-W-200 boiler safety relief valves are reported to have a high capacity for unit size. Other features include self-aligning disk which, together with the disk holder, are of forged copper alloy; and a floating adjustable guide which assists in opening and closing actions of these safety relief valves. Made by **J. E. Lonergan Co.**, Dept. ED, Second & Race Sts., Philadelphia 6, Pa.

For more details circle NED-225 K3 on enclosed inquiry slip

Try the MODERN

SAFETY DRILL TABLE



For Faster, SAFER Work in Your Maintenance Department

Combines a drill table, a vise, a set of parallels and V block. No more lost fingers from hand held jobs that slip. No more 30 minute set-ups for a 1 minute drilling operation. Made specifications on all models. Covers MONEY BACK GUARANTEE and 30 DAY FREE TRIAL OFFER.

In 6 sizes from 8" to 28" dia. We guarantee each Safety Drill Table will save its cost on labor alone in 6 months, to say nothing of plant down time when vital maintenance is delayed even a few minutes.

FREE TRIAL OFFER

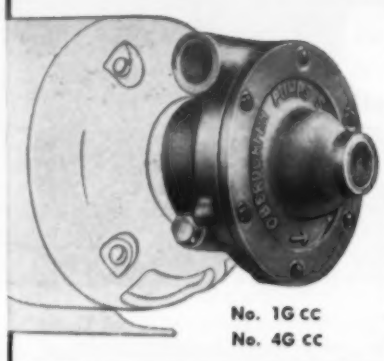
WRITE FOR FREE FOLDER

Shows many typical set-ups and use on radial drills. Complete

MODERN MACHINE TOOL CO.
Jackson, Michigan

For more details circle NED-226 K3 on enclosed inquiry slip

Close coupled, centrifugal, motor driven
OBERDORFER BRONZE PUMPS



No. 1G CC
No. 4G CC

1G cc is complete motor-pump unit with 1/12 H.P., 3450 RPM, 110 volt, A.C. ball bearing thermal overload motor. Motor frame Nema 42 with end bell machined for pump mounting. Pump has mechanical Rotary face type seal.

4G cc is complete motor-pump unit with ⅓ H.P., 3450 RPM, 110 volt, A.C. thermal overload motor. Motor frame Nema 56 with end bell machined for pump mounting. Pump has mechanical Rotary face type seal.

OVERALL DIMENSIONS—Motor and Pump Unit

Pump No.	Height	Width	Length	Suction	Discharge
1G cc	5"	4¾"	9"	⅜ N.P.T.	⅜ N.P.T.
4G cc	6⅝"	6 5/16"	11¼"	¾ N.P.T.	½ N.P.T.

CAPACITIES—Gal. per min. —3450 RPM - Foot Water Head

Ft. Water	0	5	10	15	20	25	30	35
1G cc	7	6½	5	4	1½	—	—	—
4G cc	23	22	20	18	15	12	8	2

See our catalog in Sweet's PRODUCT DESIGN File

Oberdorfer Foundries, Inc., Ind. Pump Div.
2310 Thompson Rd. Syracuse, N. Y.

For more details circle NED-227 K3 on enclosed inquiry slip

ELECTRIC and PHOTO-ELECTRIC COUNTERS for every job

Count Anything—Anywhere

Parts, sheets, bottles, cans, boxes, oranges, people, shadows, box-cars – measure lengths of wire, rope, tape, paper, fabric.

Counting Problems Solved

Helping you stop guesswork, save labor, eliminate waste and avoid human error through automatic counting is our business.

Ask your PIC Representative or tell us what you want to accomplish.

Complete Catalog mailed on request

PRODUCTION INSTRUMENT COMPANY
700-12 W. Jackson Blvd., Chicago 6, Ill.

For more details circle NED-228 K3 on enclosed inquiry slip

All aboard for *MODERN, FASTER FINISHING*...New Economy, Quality, Versatility

Lionel assembly-line operation de-burring sharp edges and flashing on locomotive

LIONEL HIGHBALLS PRODUCTION WITH BRIGHTBOY!

See the newest Lionel Trains, soon arriving in your nearby stores! See the superb Brightboy de-burring work that makes the metal edges and surfaces smooth and safe in the hands of junior railroaders!

Brightboy, in many time-saving textures, will speed up your production time table. You will get faster, finer finishing of stainless steels, forged aluminum, hard metals and all others—and plastics, wood, glass, laminated materials.

Ask your dealer to recommend the Brightboy textures best suited to your work—and for the Brightboy Catalog-Manual. Write us if he cannot supply you, or on any problem where finishing is involved.

BRIGHTBOY INDUSTRIAL DIVISION
WELDON ROBERTS RUBBER CO.
95 No. 13th St. Newark 7, N. J.

America's Pioneer Manufacturer of Rubber-Bonded Abrasives

Brightboy REG. U.S. PAT. OFF.

For more details circle NED-229 K3 on enclosed inquiry slip

You Get the BEST!

IN METAL STAMPINGS— WASHERS PARTS ASSEMBLY WORK from

SEND TODAY FOR THIS VALUABLE 16-PAGE BOOKLET

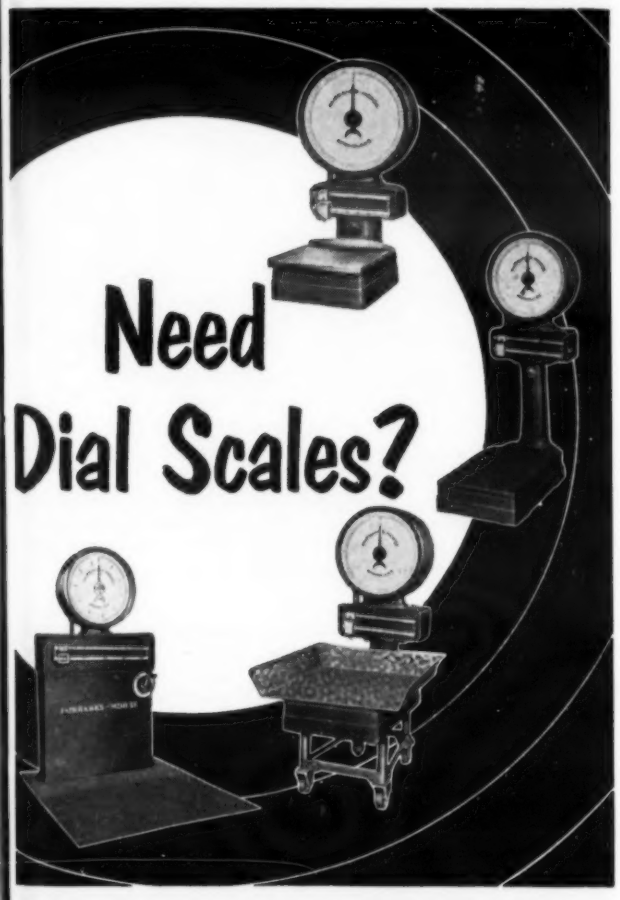
Contains complete data on:

TENSION WASHERS
FRICTION WASHERS
FINISHING WASHERS
WIRE TERMINALS
BLANKING DIES
DISHED BLANKS
STANDARD GAUGES
GENERAL STAMPINGS
PROGRESSIVE AND COMPOUND DIES

We have a press capacity up to 150 tons— depth of draw to 4 in.

THE QUADRIGA MANUFACTURING CO.
221 WEST GRAND AVENUE • CHICAGO 10, ILLINOIS

For more details circle NED-230 K3 on enclosed inquiry slip



FAIRBANKS-MORSE

has 'em!

Fairbanks-Morse has an accurate, easy-to-read, easy-to-operate Dial Scale to exactly suit your particular requirements—whatever your weighing operation.

You have fewer moving parts in a Fairbanks-Morse Dial Scale . . . you have less chance of a breakdown . . . less chance for inaccuracy.

And Printomatic Recorders will *automatically* record your weights and other pertinent data with a Fairbanks-Morse Dial Scale. See your local Fairbanks-Morse Scale Specialist . . . or write Fairbanks, Morse & Co., Chicago 5, Illinois.

FAIRBANKS-MORSE
a name worth remembering when you want the best

SCALES • PUMPS • DIESEL LOCOMOTIVES AND ENGINES
ELECTRICAL MACHINERY • RAIL CARS • HOME WATER
SERVICE EQUIPMENT • FARM MACHINERY • MAGNETOS

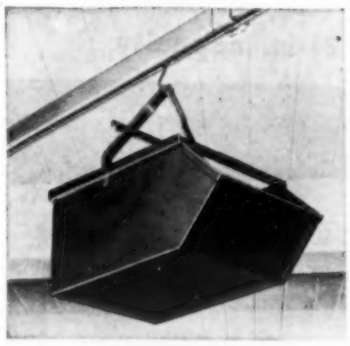
For more details circle NED-231 K3 on enclosed inquiry slip

PRECISION RADIAL BEARINGS for medium loads up to 5000 rpm

These single row, solid race type precision radial bearings with ball retainer incorporate a labyrinth seal to retain lubricant and exclude foreign materials. Both series 7600, which has extended inner race with two locking set screws, as illustrated, and series 7500 (no extension) can be provided with or without snap rings. Bearings are designed for medium loads and speeds up to 5000 rpm maximum. Normally double sealed, both series can be produced to order with seals on one side only, or without seals. Made by **Nice Ball Bearing Co.**, 2926 Hunting Park Ave., Philadelphia 40, Pa.

For more details circle NED-232 K3 on enclosed inquiry slip

CONVEYOR BIN HANGER designed for Stackbin handling



Specially designed for Stackbin materials handling boxes, this conveyor hanger permits units to be handled on overhead conveyors to speed transportation between handling points. The hangers are said to be easy to attach, and to lock securely in place without the use of tools. Made by **Stackbin Corp.**, 1081 Main St., Pawtucket, R. I.

For more details circle NED-233 K3 on enclosed inquiry slip

LOCKSTITCH MACHINE handles all material weights, types

Ability to handle all weights and kinds of material at peak efficiency on long and short runs is a feature of the class 61400 lockstitch machine. Improvements incorporated are in acceleration, speed, feeding and thread handling. Design includes sealed oil distribution system with flow of oil in direct proportion to machine speed, uniform stitching, flat seams and easy adjustment of stitch length from 5 to 25 per inch. Made by **Union Special Machine Co.**, 416 N. Franklin St., Chicago 10, Ill.

For more details circle NED-234 K3 on enclosed inquiry slip

POR-ROK (POUR ROCK)

Fast Setting Cement

PERMANENTLY ANCHORS BOLTS IN CONCRETE WITHIN 30 MINUTES!

Securely fastening machinery, hand rails, seats, fixtures or any type of equipment to concrete by means of anchor bolts can now be done quickly, easily and safely with Por-Rok Quick Setting Cement.

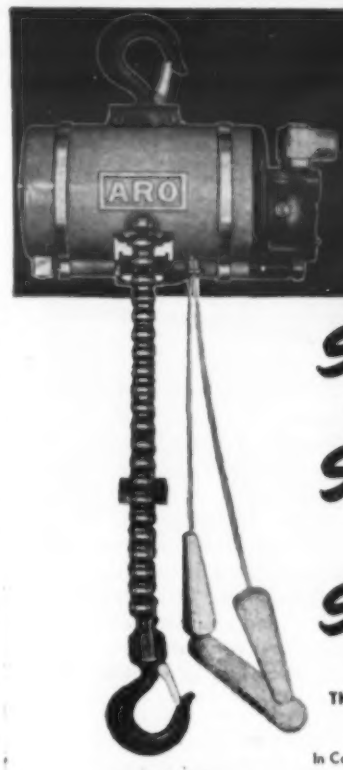
Por-Rok successfully replaces lead and sulphur, and costs considerably less. Applied cold, there is no heating hazard. Simply mix Por-Rok powder with water and pour around bolt. Within 30 minutes the cement sets hard and the bolt is anchored permanently.

Por-Rok also makes quick, lasting repairs to holes and breaks in concrete floors with little or no interruption to normal traffic. It is self-bonding, self-leveling, oil-resistant, does not shrink. Compression strength of 4500 lbs. p.s.i. in one hour GUARANTEED.

For complete information—without obligation—write

THE HALLEMITE MFG. CO.
2452 WEST 25th ST. • CLEVELAND 13, OHIO
SINCE 1927

For more details circle NED-235 K3 on enclosed inquiry slip



ARO 1000 pound AIR HOIST

SPEED...
Lift rate . . . over 40 ft. per minute!

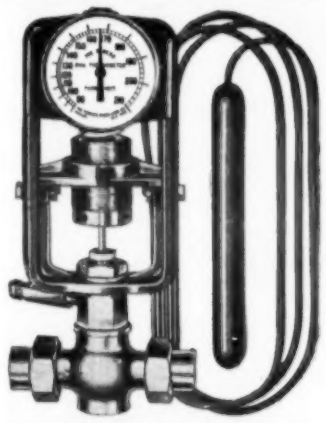
SIZE...
Overall length 10¼" weighs only 28½ lbs.

SAFETY...
Betters all safety requirements!

Write for full details.
The Aro Equipment Corporation
Bryan, Ohio
Offices in All Principal Cities
In Canada—Aro Equipment of Canada, Ltd. Toronto, Ont.

ARO AIR HOIST
Also . . . Air Tools . . . Lubricating Equipment . . . Aircraft Products . . . Grease Fittings

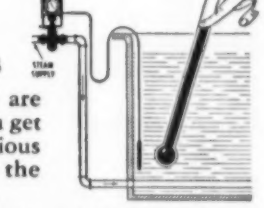
For more details circle NED-236 K3 on enclosed inquiry slip



NEW POWERS REGULATOR

For
Plating • Anodizing
Bonderizing • Pickling
Cleaning • Rinsing

Holds temperature where you want it.



Saves LABOR and Steam
Helps Eliminate Costly Rejects

Powers No. 11-MF Regulators are self-operating. They will help you get the most effective use from various solutions by holding them at the right temperature automatically.

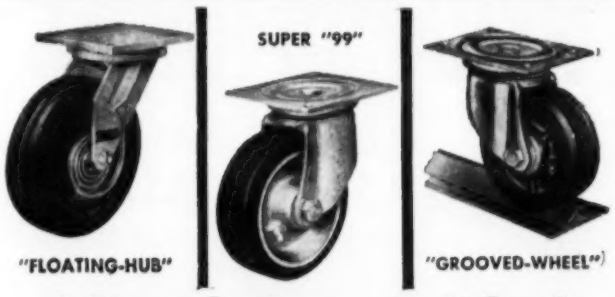
Plastic Covered Thermal Bulb and Tubing—is highly resistant to solutions in above processes. Prevents electrical shorts. No insulators required for the regulator.

Easy to Read 4" Dial Thermometer—indicates temperature of liquid being controlled and makes it easy to adjust regulator for different temperatures.

Bulletin 330 describes this simple, dependable control. May we send you a copy? (b31)

THE POWERS REGULATOR CO., SKOKIE, ILL.
Offices in over 50 Cities, see your Phone Book • Established in 1891.

For more details circle NED-237 K3 on enclosed inquiry slip



A Bassick Caster or Wheel for every need!

Whatever the moving problem, there's a Bassick size and type to solve it.

"Floating-Hub"—the only caster with true shock-absorption.

Super "99"—the new, heavier wrought steel, double ball race, top quality, general purpose casters.

"Grooved-Wheel" Casters—4 in. to 10 in. wheel sizes for light and heavy service requirements.

All types of industrial wheels.

Write for complete Truck Caster catalog to the world's largest manufacturer of casters . . . THE BASSICK COMPANY, Bridgeport 2, Conn. *In Canada:* Belleville, Ont.

Bassick
A DIVISION OF STEWART SW WARNER
MAKING MORE KINDS OF CASTERS . . . MAKING CASTERS DO MORE

For more details circle NED-238 K3 on enclosed inquiry slip

STOP VIBRATION.....

2 WAYS WITH...

LOVEJOY FLEXIBLE COUPLINGS

By use of special cushion materials, Lovejoy Flexible Couplings stop vibration due to misalignment of shafts and vibration inherent in either connected machine! Shock, backlash and surge are also absorbed — instantly and permanently. No shutdowns for changing cushions, which are available for every service . . .1/6 to 2500 H.P. No lubrication ever needed.

Write for catalog and Quick-Finding Selector Charts

LOVEJOY FLEXIBLE COUPLING CO.

5003 W. Lake St. Chicago 44, Ill.

Also Mfrs. of Lovejoy Universal Joints and Lovejoy Variable Speed Transmissions

For more details circle NED-239 K3 on enclosed inquiry slip

SIDE-LOADING FORK TRUCK is also a fast load carrier

With an inboard deck which will carry loads weighing up to 30,000 lb and a maximum travel speed of 30 mph, this Traveloader also serves as a side-loading fork truck for picking up and stacking in narrow aisles. During stacking operations the unit is stabilized by floor jacks, hydraulically operated from the drivers' seat. A variety of attachments including crane arms, rams and master pallets for multiple pallet loads are available. The lift height is 12 ft and dual pneumatic wheels are fitted front and rear to give four-point load distribution. Unit is especially useful in yard handling work where long hauls and stacking are both required. Made by **Baker-Raulang Co.**, Baker Industrial Truck Div., 1245 W. 80th St., Cleveland 2, O.

For more details circle NED-241 K3 on enclosed inquiry slip

PNEUMATIC SAW portable, has 21-in. capacity

With a 21-in. capacity and unlimited depth of cut, model AS-221 pneumatic portable wood saw has a reciprocating blade and will saw circles with a 12-in. radius. Air consumption is under 60 cfm at between 70 and 100 psi, and weight complete with saw blade is 14½ lb. Saw blades are of alloy steel, and have a general purpose cut which will crosscut, angle, rip and notch with a 3/16-in. kerf. Front spade-type handle is instantly adjustable through 360 degrees for easy handling in close quarters. In addition to usual heavy-duty applications, the saw is also suited for working under water, as in shoreline construction projects. Made by **Wright Power Saw & Tool Corp.**, 294 Longbrook Ave., Stratford, Conn.

For more details circle NED-242 K3 on enclosed inquiry slip

DO YOU KNOW? Use of two-way radio system, costing less than $3500, has resulted in a savings of $20,000 in its first year of operation on materials handling vehicles at the Augusta, Ga. Arsenal, according to reports. A single radio dispatcher controls the activities of six materials handling vehicles from a central dispatch point. Radio equipment is made by General Electric Co., Electronics Park, Syracuse, N. Y.

For more details circle NED-243 K3 on enclosed inquiry slip

Paltier

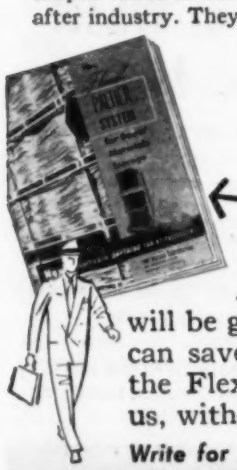
"TIERS OF RACKS"

PYRAMID RACKS

PATENTED

SAVE SPACE . . . and YOU SAVE DOLLARS!

PALTIER PYRAMID RACKS are storing as much as 75% and more crushable, bulky and irregular shaped items in the same storage area — in industry after industry. They save their cost in no time at all.



A Paltier User Says:

"We are now able, in one operation, to load and unload various colors or styles of asphalt or asbestos shingles while under previous systems it sometimes required movement of five to eight stacks of material to obtain the pallet where the correct item was stacked"

— a real time saver!

Ask Us!

A Paltier storage engineer will be glad to show you how you can save storage space, too, with the Flexible Paltier System. Ask us, without obligation.

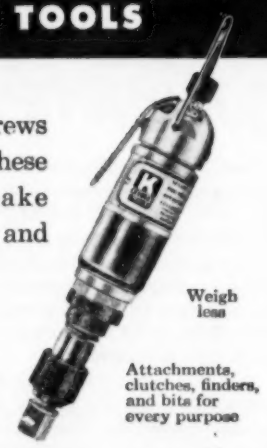
Write for 16-page Catalog

THE PALTIER CORPORATION 1705 KENTUCKY ST. MICHIGAN CITY, IND.

For more details circle NED-240 K3 on enclosed inquiry slip

Save Time— Speed Assembly WITH KELLER AIR TOOLS

Wherever there are screws to drive or nuts to set, these lightweight tools make work easier and faster, and reduce labor costs.



Consume less air

Weigh less

Interchangeable parts

Reduce operator fatigue

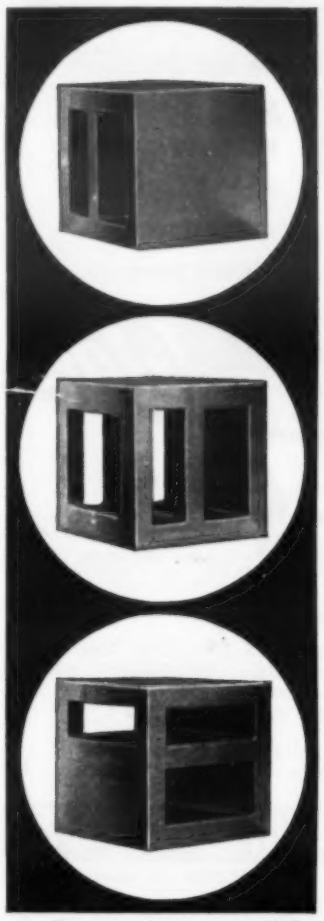
Attachments, clutches, finders, and bits for every purpose

Send for illustrated descriptive bulletin and detailed information

Keller Tool Company

GRAND HAVEN, MICHIGAN

For more details circle NED-244 K3 on enclosed inquiry slip



3 IN 1.

COMBINATION TOOL

CHALLENGE UNIVERSAL BOX ANGLE

This new versatile tool has the clamping facilities of an *angle iron* . . . the stability, balance and accuracy of a box *parallel* . . . the perpendicular flat surface of an angle plate. Made of high grade special analysis semi-steel, heat treated and precision ground. Furnished in two sizes — 6x6x6 and 8x8x8 inches. Other sizes can be made to order.

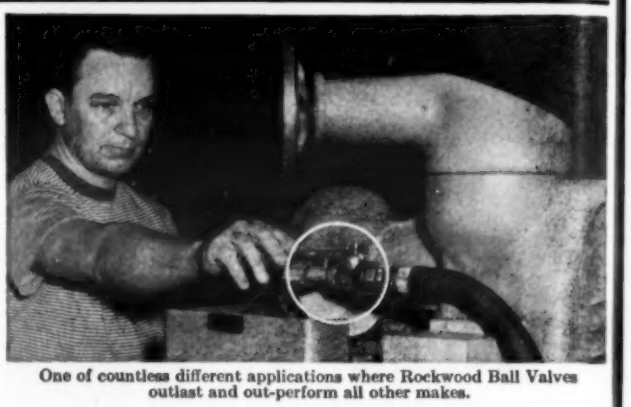
747

Challenge TRADE-MARK ®

THE CHALLENGE MACHINERY COMPANY

Office, Factories and Show Room: Grand Haven, Mich.

For more details circle NED-245 K3 on enclosed inquiry slip



One of countless different applications where Rockwood Ball Valves outlast and out-perform all other makes.

Do you need a MAINTENANCE-FREE VALVE?

Maintenance-Free in Coolant Service. Previous valves on this grinding machine were repaired or replaced at least once weekly. The present Rockwood Ball Valves, operating 500 times daily, have required no maintenance in over a year.

Other features: full *round* flow, positive leakproof seating, quick opening and closing. Tested and listed by Underwriters' Laboratories, Inc. Write for complete details. Rockwood Sprinkler Company, 44 Harlow Street, Worcester 5, Mass. Distributors in all principal cities.

ROCKWOOD

ROCKWOOD FULL-FLOW BALL VALVES

THE FLOW IS AS ROUND AS THE PIPE ITSELF

For more details circle NED-246 K3 on enclosed inquiry slip

Keep Lubrication Fittings Clean

with S.S. WHITE ELASTOPLASTIC CAPS

Here's a tip that will help cut maintenance costs and prolong bearing life . . . use these inexpensive flexible plastic caps on your lubrication fittings. They'll keep the fittings free from the dirt and grit that's often forced into the bearings when the grease gun is applied. The caps can be slipped on and off with ease — and once on, won't shake loose. They're also unaffected by oil, grease or water.

Sizes for Hydraulic, Button Head or 1/8" Dot Type Fittings. Order a supply.

THE S.S. White INDUSTRIAL DIVISION

DENTAL MFG. CO. Dept. 7P, 10 East 40th St. NEW YORK 16, N. Y.

WESTERN DISTRICT OFFICE: Times Bldg., Long Beach, Calif.

For more details circle NED-247 K3 on enclosed inquiry slip

NEW HOBBS SLITTERS & REWINDERS HANDLE LIGHTER and HEAVIER MATERIALS!

Tender, delicate film, as well as heavier weights of paper, plastics, and fabrics are easily handled on low-cost, low-maintenance Hobbs machines.

MODEL 45 SLITTER & REWINDER

Now you can select from *three* types of cutters and use the one which is best for *your* material. Shear-type, rotary contact or razor-type cutters *all* available!

Smoother starts and stops are made possible by Warner electric clutch and brake. Makes it easy to handle light, tender films, foils, etc. without damage. Power to clutch adjusted by simply turning rheostat button! Four models available to cut widths up to 30", 40", 45", and 60". Rewinds up to 30" diam. Material up to 20/1000" thick.

Send for complete information! Free factory test run using your material without obligation!

HOBBS MANUFACTURING CO.
41 SALISBURY ST., WORCESTER 5, MASS.
EST. 1882
Chicago Office: 549 W. Washington Blvd.

Manufacturers of Jacques Hand Shears, Hobbs Production Cutters, Corner Cutters, Slitters and Rewinders, Autotronic and Tri-Power Die Presses

▲ For more details circle NED-248 K3 on enclosed inquiry slip ▲

SAVE HOURS in finishing time

with LIQUAMATTE wet blasting

Tools, dies, molds, engine parts, etc. requiring 1 to 6 hours to finish by hand methods are now finished in from 30 seconds to 10 minutes in a Liquamatte Wet Blasting Machine. It produces finishes mechanically at high speeds that previously have been impossible to achieve except by hand methods.

For example, at the Oling Tool Company a Liquamatte is saving an average of 50% on former time and labor requirements for surfacing tools prior to plating. On some items, such as drill bits, savings as high as 80% have been effected.

send for these bulletins today

these bulletins tell how

Save Time on Tools, Dies, Molds. Bulletin 43 — Save Time on Glass Molds Bulletin 53 — Save Time on Plastic Molds. Bulletin 63

American WHEELABRATOR & EQUIPMENT CORP. LIQUAMATTE WET BLASTING

508 S. BYRKIT STREET, MISHAWAKA, INDIANA

▲ For more details circle NED-249 K3 on enclosed inquiry slip ▲

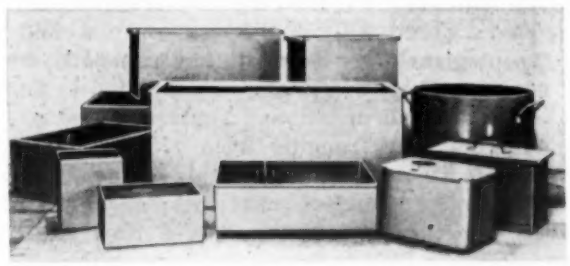
BIN-TO-STOKER CONVEYOR
motor driven unit easily installed

Of welded steel construction, the Janitor-Saver bin-to-stoker motor driven conveyor is 5 in. wide, 5 in. high and weighs 6 lb per foot. It is made in 10, 13, 16, 19, 22, 25 and 28-ft lengths and is equipped with a ⅓ or ½-hp motor and adjustable mount, natural rubber friction surface belt, adjustable head pulley for tightening, automatic belt scraper and 9 x 18-in. hopper for shovel loading. Accessories are available for bin loading. Design permits increasing or decreasing lengths as requirements change. Belt speed is about 250 fpm. Available from **Stahmer Supply Co.,** Dept. N, 6506 W. North Ave., Chicago 35, Ill.

▲ For more details circle NED-250 K3 on enclosed inquiry slip ▲

MADE-TO-ORDER TANKS
sizes range from 1 to 150 gallons

Several sizes and models of tanks in this photograph are a few of many styles that can be made to special requirements of 14 to 18-gage steel in sizes ranging from 1 to 150 gallons. Features frequently included are baffles, settling and collecting trays, baskets, filter screens, hinged covers, shelves, covers with safety devices, casters, etc. Standard designs also are available. Typical applications include coolant and filtering systems, degreasing, soaking and dipping, oiling systems, hydraulic systems, and others. Made by **Graymills Corp.,** Dept. C, 3717 N. Lincoln Ave., Chicago 13, Ill.



▲ For more details circle NED-251 K3 on enclosed inquiry slip ▲

DO YOU KNOW? A new form of methylstyrene from which plastics of high heat resistance can be made is now being produced in experimental quantities. Polymers produced from this material have shown significant properties in such applications as injection molding compounds, surface coating resins and low pressure laminating compounds having high heat resistance. Developed by American Cyanamid Co., 30 Rockefeller Plaza, New York 20, N. Y.

▲ For more details circle NED-252 K3 on enclosed inquiry slip ▲

SPEED UP SMALL PARTS ASSEMBLY

Parts feed automatically toward front—
end reaching and fumbling.
Bins taper toward front to form convenient semicircle—keep all bins within easy reach.
Stacking, locking construction for rigid set-ups, easily changed when necessary.
All-welded construction. Smooth, folded edges.
New-design, adjustable hoppers provide increased capacity and permit regulated flow of parts according to sizes and weights.
Two-sizes—tapered or straight sides.

IMMEDIATE DELIVERY
Manufactured and sold in Canada exclusively by Wickware-Stackbin, Ltd., Ottawa
Write Stackbin Corp., 1081 Main Street, Pawtucket, R. I.

STACKBIN SYSTEM
"Stacked and Still Accessible"

▲ For more details circle NED-253 K3 on enclosed inquiry slip ▲

Hanna *Fluid Power* Cylinders give you POWER for production

Hanna Pneumatic and Hydraulic Cylinder power helps cut production costs and increases production in your plant by replacing manual operations with perfectly controlled power. "Cylinder Power in Action" shows you 27 different ways you can put Hanna Cylinders to work for you. Write for free Bulletin 255 TODAY!

Hanna Engineering Works
HYDRAULIC AND PNEUMATIC EQUIPMENT — CYLINDERS — VALVES — RIVETERS
1759 ELSTON AVENUE • CHICAGO 22, ILLINOIS

▲ For more details circle NED-254 K3 on enclosed inquiry slip ▲

SEE HOW General CAN CUT YOUR PACKAGING AND SHIPPING COSTS . . .

SEND FOR FREE BOOKLET

General Box COMPANY
1859 Miner Street
Des Plaines, Illinois

Factories: Cincinnati; Denville, N. J.; Detroit, East St. Louis, Kansas City, Louisville, Milwaukee; Prescott, Ark.; Sheboygan; Winchendon Mass.; General Box Company of Mississippi, Meridian, Miss.; Continental Box Company, Inc., Houston.

▲ For more details circle NED-255 K3 on enclosed inquiry slip ▲

NEARLY TWO MILLION NOW IN USE

FOSTORIA LOCALITES
for Machine Tools, Assembly and Inspection Benches

Industry's best tool for fast, accurate, comfortable "Seeing"

$6.12 EACH in package of 6
Single Units $7.65 Each

MODEL 3267-H-174
Overall length 32¾". Three instantly adjustable joints. Flat oblong base for machine screw mounting.

- **Rugged Construction** withstands vibration and rough handling
- **Instantly Adjustable** with flexible ball and socket joints
- **Reflector** accommodates 100 watt or any A-19 or A-21 medium screw base lamp
- **Baked Enamel Finish** — Exterior, smooth Gray — Reflector Interior, high temperature White
- **Wired Complete** with switch socket and 8-ft. oil-resistant cord and moulded plug

LOCALITE fostoria for Light ON the Job

Write for complete catalog of Localite models with various type reflectors, arms and bases for every industrial use.

THE FOSTORIA PRESSED STEEL CORPORATION
FOSTORIA, OHIO
Localites are available through wholesalers everywhere

▲ For more details circle NED-256 K3 on enclosed inquiry slip ▲

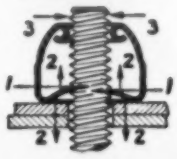
Low-cost lock nut Saves 2 ways

1 used as a load-carrying nut —offers triple locking action

Provides vibration-proof assembly of light parts, without lockwashers. Three locking forces assure tightness (see cross-section). Has pleasing appearance of cap or acorn finishing nuts.

2 used as an adjusting nut —stays put anywhere on the screw

Holds any desired setting or position on screw thread. Locking force 3 (see cross-section) hold PALNUT in position with six powerful spring jaws which grip outside of screw.



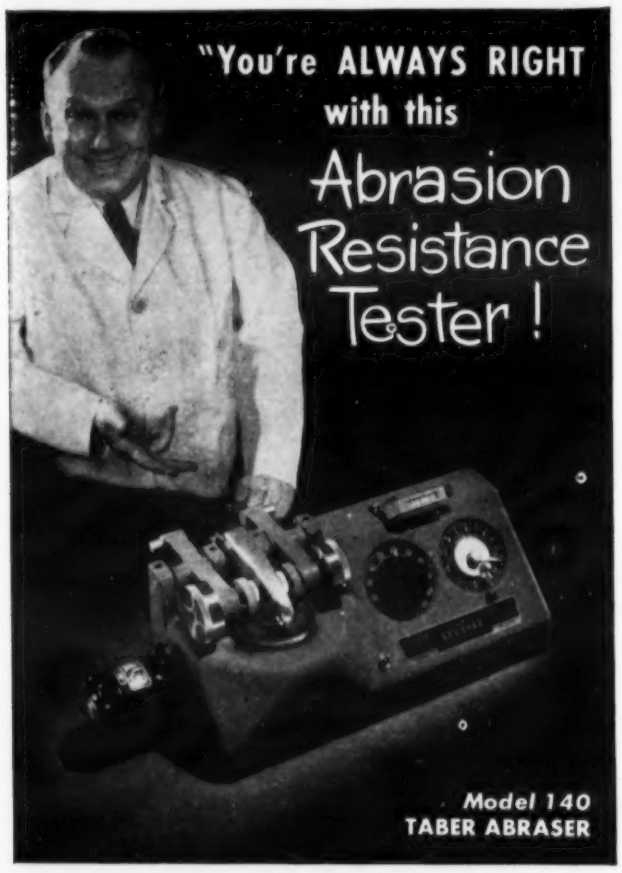
- *Triple locking action holds tight under vibration*
- *Fast assembly*
- *Light weight*

Send details of application for free samples and catalog showing full line of PALNUT Lock Nuts.

The PALNUT Co.
45 Cordier St., Irvington 11, N. J.
In Canada
P. L. Robertson Mfg. Co., Ltd.
Milton, Ontario

ADJUSTING TYPE
PALNUT
TRADE MARK
LOCK NUTS

For more details circle NED-257 K3 on enclosed inquiry slip



Here's the instrument that the whole world accepts as the standard abrasion or wear tester for plastics, paints, linoleum, rubber and textiles. Simulates actual wear conditions during test and gives an accurate numerical index for your report. Send for booklet below for all the facts.

SHEAR HARDNESS and DIAMOND SCRATCH TESTER

Tests quality of plastic material and plastic coated surfaces to resist scratches, digs, scrapes and other physical damage not classed as normal wear. Handles specimens from thin plate to ¼" thickness. Used everywhere for precision perfect tests.

The Taber STIFFNESS GAUGE

Determines both INITIAL and NORMAL stiffness of sheet and wire specimens and gives report from DIRECT READING. Precision shear cuts exact specimens from paper or plastic (up to 20 pt.) to eliminate possible variation in results.

Taber INSTRUMENT CORPORATION
SECTION 16
111 Goundry St., North Tonawanda, N. Y.

☐ Please send me booklet on Taber Abraser
☐ Please send me booklet on Taber Hardness and Scratch Tester
☐ Please send me booklet on Taber Stiffness Gauge

NAME .....
COMPANY .....
ADDRESS .....
CITY ..... ZONE ..... STATE .....

For more details circle NED-258 K3 on enclosed inquiry slip

MINIATURE MAGNETIC AMPLIFIERS have high power-handling ability

Through use of special core materials, winding techniques and mountings, coupled with high frequency alternating current, line of miniature magnetic amplifiers attain rapid response and have high power-handling ability. Line includes 4000 and 2000-cycle amplifiers in addition to standard 400 and 60-cycle units. Illustrated model MA-48 weighs only 3 oz, yet delivers power output rated at 25 w with rapid response time and high power gain. Made by **D & R, Ltd.**, 402 E. Gutierrez St., Santa Barbara, Calif.

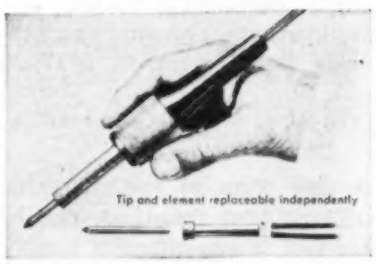
For more details circle NED-259 K3 on enclosed inquiry slip

AIR CYLINDERS feature built-in operating valve

Featuring a built-in operating valve, this line of double-acting cylinders requires only one pipe connection and increases efficiency by reducing line friction. Valves can be furnished with dual speed controls, and are of the universal type so that they can be operated by poppets, direct or remote, or converted to double or single solenoid operation. Units are available in cylinder diameters ranging from 1½ through 6 in. A full line of two-way poppet valves will be offered in addition to standard electrical conversion kits. Made by **Carter Controls, Inc.**, 2876 Bernice Rd., Lansing, Ill.

For more details circle NED-260 K3 on enclosed inquiry slip

PENCIL SOLDERING IRON tip and handle are independent



With nickel-chromium and mica wound mounted elements, this pencil soldering iron features independent and separately replaceable tip and element. Unit is recommended for such work as soldering instruments, small electronic assemblies and jewelry, and is made in 110 and 220-v ac or dc models. It is available in 25 or 30-w ratings with ⅛ and 3/16-in. tips, respectively. Made by **Hexacon Electric Co.**, 145 W. Clay Ave., Roselle Park, N. J.

For more details circle NED-261 K3 on enclosed inquiry slip

Where to use INSUL-MASTIC Coatings

These *Superior* coatings can end many problems in your plant for many years to come.

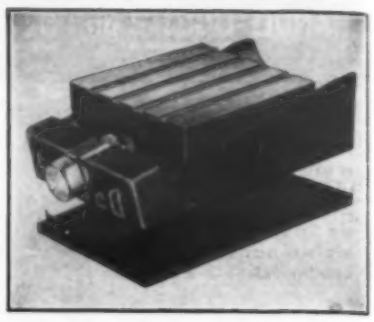
- They prevent corrosion from moisture, acids and other chemicals!
- They control condensation or sweating!
- They insulate!
- They stop walls and roofs from leaking!
- They keep insulation dry and protected!
- They deaden sound!
- They attractively resurface old buildings!

A 44-page catalog will give you more ideas for employing INSUL-MASTIC *Superior* coatings. Write for it today.

Insul-Mastic
CORPORATION OF AMERICA
Oliver Building • Pittsburgh 22, Pa.
Representatives in Principal Cities

For more details circle NED-262 K3 on enclosed inquiry slip

IMPROVED MACHINE LEVELING JACK is 50% stronger yet lower in height.



Engineering improvements have made this Jack 50% stronger yet lower in height. This was accomplished by redesigning the Empco Jack so that the adjusting screw always remains cradled in the assembly. This insures full bearing of either front or back collar at any stage of operation.

Once the machine is set on Empco Jacks, the simple turning of adjusting screw, with a hand wrench will lower or raise the machine until your level indicator reads "zero". With this feature, periodic machine leveling can be done in a matter of minutes.

To reduce vibration, Vi-Sorb Mounting Pads are available with each style Empco Jack. These pads substantially reduce vibration, the percentage of reduction usually depends upon the thickness of the pad that is used.

Level machine installations with periodical re-leveling is essential to lower costs of machine maintenance. These costs are further reduced by the use of Vi-Sorb Mounting pads under every Empco Leveling Jack.

Available in three styles: JC-1 (standard) and JC-2 (heavy duty) pictured here, and the newest style JS particularly designed for use with anchor bolts. Many models in all styles with minimum height ranging from 1⅞" to 4".

For complete specifications and prices write the **Enterprise Machine Parts Corporation**, 2727 Jerome Ave., Detroit 12, Michigan. *Advt.*

For more details circle NED-263 K3 on enclosed inquiry slip

Leaking Air is an expensive luxury

If you can't afford it, HILLS-McCANNA *Saunders Patent* **diaphragm valves will put an end to it!**

WRITE FOR LITERATURE

HILLS-McCANNA
Saunders Patent
diaphragm valves
HILLS-McCANNA COMPANY, 2455 Nelson Ave., Chicago 18, Ill.

For more details circle NED-264 K3 on enclosed inquiry slip

Supplementary Heat

Hy-Lo Salamander — the ideal all purpose heater to keep men and equipment working. Produces up to 140,000 BTU per hour — uses any good grade fuel oil — one filling lasts 10 to 20 hours burning ½ to 1 gallon per hour. This low cost all purpose heater is the answer for emergency or permanent space heating. No other portable heater produces so much heat at so little cost.

Nationally Used

Distributors in all principal cities – write or wire for nearest distributor.

HY-LO
Oil-Burning Salamander
SCHEU PRODUCTS COMPANY
UPLAND, CALIF. WAREHOUSE: CHICAGO
HEATING • DRYING • THAWING — COMFORT HEAT

For more details circle NED-265 K3 on enclosed inquiry slip

FREE CATALOG... New Coated Abrasive Selector by CARBORUNDUM

Source: THE CARBORUNDUM COMPANY
Niagara Falls, New York

This new "Coated Abrasive Selector for the Average Grinding Job" helps you choose the right coated abrasive for any machine or hand abrasive operation—on metals, non-metallics, or wood.

The recommendations given are complete—including grain sizes and types, backings, coatings, product sizes, prices and packaging information. Metalworking recommendations include coated abrasives for hand, portable and disc sanding; and for contact wheel, platen, and slack-of-belt machine grinding. Recommendations for roughing, polishing, and finishing glass and other non-metallic materials are also shown. For woodworking, coated abrasives are listed for hand sanding and finishing, and machine sanding with the following types of sanders: oscillating, flat belt, edge, turning, moulding, drum, disc, and others.

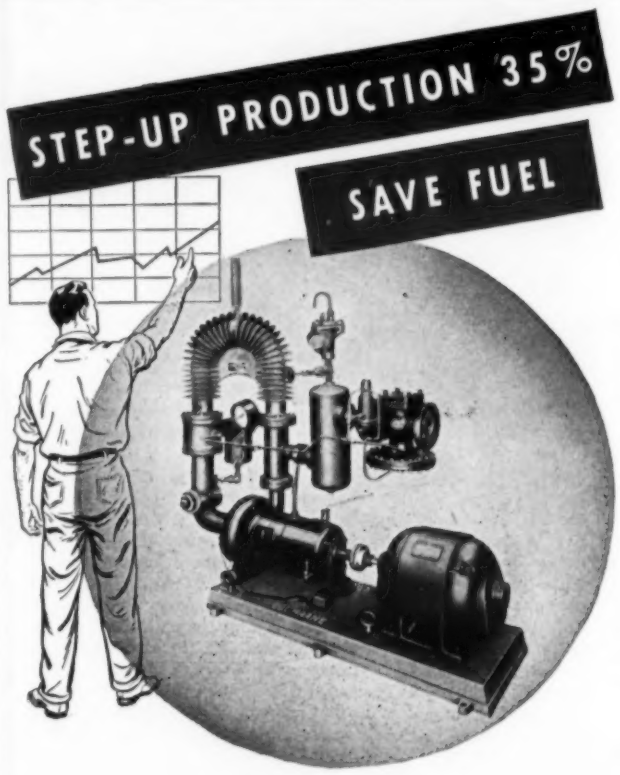
A special section lists contact wheels—both solid and universal hub, serrated and plain. The "61" Port-A-Belt grinding attachments are also described fully. In addition, you will find a list of machine manufacturers—giving machine model numbers and belt sizes.

It's free! Get this handy catalog today. Write to Dept. NED 82-310.

"Carborundum" and "Port-A-Belt" are trademarks of The Carborundum Company, Niagara Falls, New York

82-310

▲ For more details circle **NED-266 K3** on enclosed inquiry slip ▲



cochrane

C-B

CONDENSATE DRAINAGE CONTROL SYSTEM

Over 1700 installations in plants of blue-chip companies processing with steam prove it will do the job better. (Names and case histories on request.)

Faster Heat—quick, thorough removal of air and condensate

Higher Temperature—faster, more intense heat transfer

Uniform Heating—fluctuations leveled-out, cold spots eliminated, product quality improved

Lower Maintenance—corrosive gases and entrained air automatically removed from returned condensate.

The Cochrane "JET" Unit removes "insulating" layers of condensate continuously and efficiently from all types of steam processing equipment... shortens cooking and drying cycles... provides more intense latent heat transfer, resulting in production increases up to 35%.

And by returning condensate to the boiler without appreciable pressure or temperature drop, savings in fuel costs of 1% for every 11° rise in water temperature are achieved... in some cases as high as 20%. Make-up water cost and requirements decline sharply. No water lost through flashing.

Consult us on condensate drainage and recovery problems—The C-B (condensate booster) can be the answer that will increase the over-all efficiency of your operations—Write today for Pub. 3250 containing detailed information. Let us prove to you that the "JET" principle does produce results.

cochrane

corporation

3143 N. 17th Street, Philadelphia 32, Pa.
offices in 29 principal cities

▲ For more details circle **NED-267 K3** on enclosed inquiry slip ▲

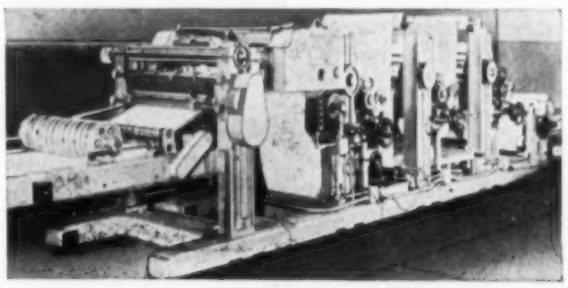
LUBRICATION SYSTEM for up to 36 individual points

Minute quantities of lubricant are delivered to as many as 36 individual points, regardless of the differences in pressures required, by this Lo-Flo lubricator. This flexible unit, offered in 18 or 36-point feed models with or without group regulation, is adjustable for flow rates from 2.3 cu in. per hour to less than 1 cu in. per 700 hr. Lubricants ranging from light oils to light grease can be handled at 60° F. Outlets can be manifolded internally to increase flow to selected bearings, and unit can be used with separate or integral reservoir. Available drives are rotary shaft, built-in ratchet, solenoid and pressure pulsation of liquids or gases. On large systems, a number of remotely located units can be driven and supplied from a convenient central station. Working pressure is 500 psi. Made by **Nathan Mfg. Corp.**, 416-A E. 106th St., New York 29, N. Y.

▲ For more details circle **NED-268 K3** on enclosed inquiry slip ▲

ROTARY WEB PRINTING PRESS for offset-gravure and flexographic printing of paper, film, board, etc.

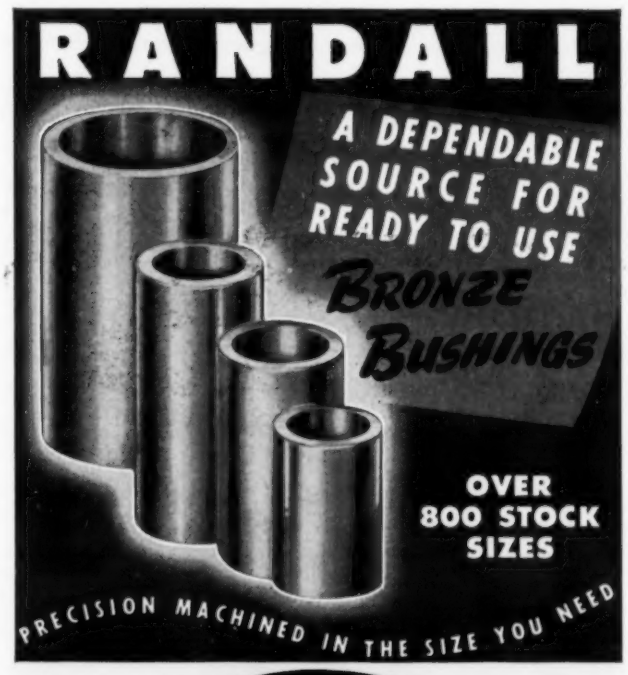
Called the Dual Process Printer, this rotary web printing press is interchangeable for both offset-gravure and flexographic processes. It will print,



tint, lacquer and coat almost any film or paper, including cellophane, foil, kraft, glassine and board. It is furnished with standard unwind and rewind, incorporates a constant tension mechanism and can be equipped for any necessary in-line operation such as slitting, die cutting and perforating.

Depending on the nature of the job, both processes can be used in combination, or either one can be used separately. Each section of the unit has its own high-speed drier, 360-degree radial and lateral running register controls, and constant web tension mechanism. New sections can be added as desired. Made by **Manhasset Machine Co.**, Dept. NED, Mineola, N. Y.

▲ For more details circle **NED-269 K3** on enclosed inquiry slip ▲



BRONZE BAR STOCK
BRONZE BUSHINGS
PILLOW BLOCKS
SHEET LUBRICATOR

Randall

GRAPHITED BEARINGS
THRUST WASHERS
SAFETY COLLARS
BRONZE CASTING

RANDALL GRAPHITE BEARINGS, INC.

1007 S. Greenlawn Avenue, Lima, Ohio

▲ For more details circle **NED-270 K3** on enclosed inquiry slip ▲

YOU GET TRUSTWORTHY LIQUID or GAS COOLING Plus Great Water Saving

● With the NIAGARA AERO HEAT EXCHANGER you can cool air, gas, water, oils, chemicals, jacket water for engines or process equipment. You get lower costs and really accurate control of temperature. You have a closed system of cooling, free from dirt and maintenance troubles.

The Niagara Aero Heat Exchanger uses atmospheric air to cool liquids and gases. Great saving in cooling water, piping and pumping and power return the cost to you quickly.

Write for Bulletin No. 120

NIAGARA BLOWER COMPANY

Dept. ED, 405 Lexington Ave., New York 17, N. Y.

▲ For more details circle **NED-271 K3** on enclosed inquiry slip ▲

"I turn extension shafts .001 under 3/16" for 1 1/2" with a .00001 tolerance. The diameter must be .1865 for the full length. It's easy to maintain this accuracy with my Clausings and I can't do it with other lathes. I doubled production and increased accuracy with my Clausing Lathes." — James H. Sawyer.

CLAUSING 6300

12" HEAVY DUTY PRECISION LATHE

The Clausing 6300 Series has every advanced feature that contributes to machining speed and efficiency. 1" collet capacity — 1 3/8" bore — forged steel spindle with tapered, key-lock nose—Timken tapered roller bearings — quick change gears — heavy duty bed. 8 speeds, 50 to 1300 RPM. 12 3/4" swing over bed, 7 1/2" over saddle. 24"-36"-48" between centers. See the Clausing 6300 at your Atlas-Clausing distributor's.

Atlas CLAUSING

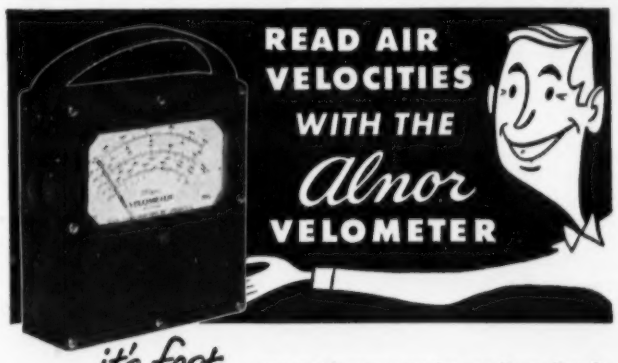
Send for Catalog TODAY!

CLAUSING DIVISION

ATLAS PRESS COMPANY, 10113 N. PITCHER ST., KALAMAZOO, MICHIGAN

LATHES • DRILL PRESSES • SHAPERS • MILLING MACHINES

▲ For more details circle **NED-272 K3** on enclosed inquiry slip ▲



it's fast . . . you get instant, precise readings directly from scale face . . . no need for reference charts or calculations. Measure air flow through ducts, grilles, motors, spray booths, etc., or in the open.

it's accurate . . . brings laboratory standards of air velocity measurement to the production line, mine, mill ...anywhere. Needs no special care or handling . . . anyone can use it and get accurate results.

it's portable . . . completely self-contained, hand-held. Rugged construction and sturdy case protect the Velometer from usual hazards of portable use. Available in scale ranges to 24,000 f.p.m. Wide selection of jets and fittings assures adaptability of Alnor Velometer to your application. Get full details and prices, write for Bulletin 2448-G. Illinois Testing Laboratories, Inc., Km. 529, 420 N. La Salle St., Chicago 10, Ill.

Alnor **PRECISION INSTRUMENTS FOR EVERY INDUSTRY**

▲ For more details circle **NED-273 K3** on enclosed inquiry slip ▲

2000 CLUTCH PLATES PUNCHED PER SHIFT

Many unusual jobs far afield from bending can be done economically on Steelweld Presses built with simple variations to suit requirements. The machine illustrated provides a low-cost method of punching clutch plates of 11 to 13 gauge metal.

Clutch plates of sizes 11¾" to 22¾" O.D. are made with this 300 ton Steelweld Press.

Send for free copy of catalog No. 2011

STEELWELD BENDING PRESSES CATALOG No. 2010

THE CLEVELAND CRANE & ENGINEERING CO.
6637 East 281st St. Wickliffe, Ohio

STEELWELD PRESSES

For more details circle NED-274 K3 on enclosed inquiry slip

GRINNELL-SAUNDERS DIAPHRAGM VALVE

The operating principle of the Grinnell-Saunders Diaphragm Valve is simple. A rubber diaphragm, seating on metal, makes possible an absolute seal. At the same time, because working parts are wholly isolated, no packing glands are necessary, and stem leaks are impossible.

Successful on compressed air lines, it was only a matter of time before Grinnell-Saunders Diaphragm Valves were in demand for other type installations . . . handling materials as diversified as corrosive fluids, gases, beverages, foods, suspended solids . . . in lines where corrosion, abrasion, contamination, clogging, leakage and maintenance are costly factors.

Grinnell-Saunders Diaphragm Valves can be had with body, lining and diaphragm materials to meet different service conditions. Write for the Grinnell-Saunders Diaphragm Valve Catalog.

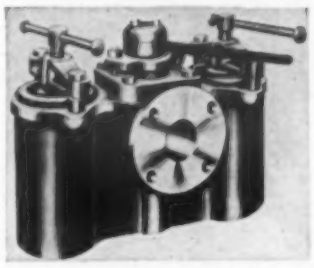
Quick Operating Valve

GRINNELL
WHENEVER PIPING IS INVOLVED

GRINNELL COMPANY, INC.
Executive Offices: Providence, Rhode Island
Sales Offices and Warehouses in Principal Cities

For more details circle NED-275 K3 on enclosed inquiry slip

PIPELINE STRAINERS
one or two baskets, remove foreign matter from liquids

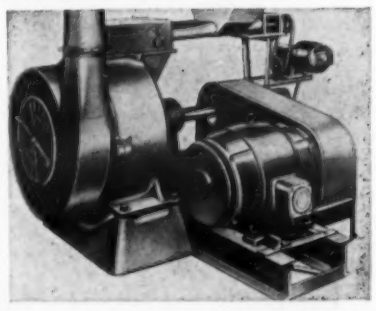


Feature of Duoflo duplex strainers for use on either suction or pressure liquid lines that have a continuous and uninterrupted flow are two removable baskets which strain or filter foreign matter from the liquid. Each basket is contained in a separate compartment with removable cover. A three-way plug valve regulates the flow so that the liquid will flow entirely through one straining basket while the other is shut off, or the flow can be divided and sent through both sides of the strainer at the same time.

Valve will not stop or reduce the main flow of liquid. One basket can be removed for cleaning while the flow is diverted to the other. Strainers are available for working pressures up to 150, 300, 500 and 1500 psi, with pipeline diameters corresponding to the pressures ranging up to 12 in. Maximum capacity is about 5 million gal per day. Available from **Sheffler-Gross Co.**, Dept. S, 1000 Drexel Bldg., Philadelphia 6, Pa.

For more details circle NED-276 K3 on enclosed inquiry slip

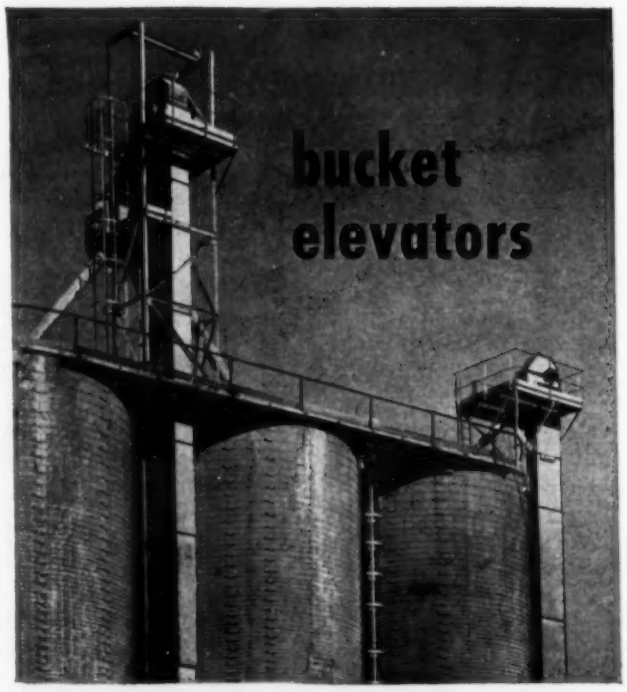
PULVERIZER
processes coarse to fine oily, brittle or fibrous materials



Product sizes available from this Superfine pulverizer range from coarse to ultrafine or from 20-mesh to 3-5 microns. It will process a variety of fibrous, brittle or oily products. Operation is based on the use of centrifugal forces and air currents to grind by shear and impact, with simultaneous internal classification and recycle of oversize. Temperature and humidity control makes it possible to provide any commercially attainable temperature and moisture content in summer and without refrigeration. For extreme requirements, jacket chilling and heating is available.

Blending up to four materials in accurate predetermined ratios can be obtained with a multiple feeder. Grinding chamber can be disassembled in 10 minutes for quick cleanup or maintenance. Machine is made in five sizes with capacities from 50 to 5000 lb per hr of finished product, depending upon the material ground and the fineness desired. Made by **Schutz-O'Neill Co.**, 319 Portland Ave., Minneapolis 15, Minn.

For more details circle NED-277 K3 on enclosed inquiry slip



THE JEFFREY MANUFACTURING CO.
Columbus 16, Ohio

IF IT'S MINED, PROCESSED OR MOVED . . . IT'S A JOB FOR JEFFREY!

sales offices and distributors in principal cities

For more details circle NED-278 K3 on enclosed inquiry slip

standardize on standard

use it anywhere

HALLOWELL CARRY-TOOL

It's the most convenient carrier in the shop. Use it on assembly lines, at machines, in the toolroom. Use it for inspection, stockroom, maintenance, and mounting small tools. Drawers have ball bearing rollers and padlock attachments. Stocked and sold by industrial distributors. Write for literature. SPS, Jenkintown 24, Pa.

Our Fiftieth Year : A START FOR THE FUTURE

HALLOWELL SHOP EQUIPMENT DIVISION **SPS** JENKINTOWN PENNSYLVANIA

For more details circle NED-279 K3 on enclosed inquiry slip

If you move hot, abrasive materials in your operations, you'll do it faster and more economically with either a Simplicity Os-A-Veyor (oscillating type conveyor) or a Model PT Positive Action Conveyor. Simplicitys are ruggedly built for tough duty. Simple power units and operating mechanism mean low maintenance costs and easy servicing. Model PT conveyors, built in lengths of 100', can be installed in multiples to meet any level-operation requirement. Os-A-Veyor types, available in lengths to 30' and 12" to 6' widths, will operate on an incline depending on product being handled. Simplicity conveyors give positive rate of feed control and handle all kinds of material, regardless of temperature and abrasive characteristics, without damage. Write, wire, or phone . . . today.

92

Simplicity
ENGINEERING CO., DURAND, MICH.

For more details circle NED-280 K3 on enclosed inquiry slip

How YOU can tie better!

U·S·S GERRARD ROUND STEEL STRAPPING For palletizing, unitizing and carload reinforcement, on odd-shapes, and on cartons, crates and bundles of every size, U·S·S Gerrard Round Strapping is easiest to use because of its flexibility. It may be applied with both hand-operated and semi-automatic machines. And Gerrard Round Strapping costs about 40% less than any other metal reinforcement.

U·S·S GERRARD FLAT STEEL STRAPPING For certain palletizing, unitizing and carload reinforcement applications, some shippers prefer U·S·S Gerrard Flat Strapping. It is available in heavy duty sizes, and the Gerrard tools for stretching and sealing it are among the most modern and efficient now made.

A Gerrard engineer will gladly help you improve efficiency or lower cost of your tying operations, if such be possible. He can advise on the tying method that *best* fits your needs. Write for further information.

A complete packaging service from carload to parcel post.

GERRARD STEEL STRAPPING DIVISION
UNITED STATES STEEL CORPORATION
2717 South Richmond St., Chicago 32, Ill.

U·S·S GERRARD
Round Steel **STRAPPING** *Flat Steel*

UNITED STATES STEEL

For more details circle NED-281 K3 on enclosed inquiry slip

PROBLEM: To get accurate positioning from female centers.

ANSWER: Lap the centers.

Ex-Cell-O Center Lapping Machines correct inaccuracies of rough centers, assuring GREATER PRECISION from your present equipment. Center lapping reduces manufacturing costs by minimizing waste from grinding rejections; decreases assembly time because of closer tolerances; All the facts are in Bulletin No. 40271. Write Ex-Cell-O for a copy today.

53-29

CENTER LAPPING MACHINES BY EX-CELL-O CORPORATION DETROIT 32, MICHIGAN

XLO

▲ For more details circle NED-282 K3 on enclosed inquiry slip ▲

SPARE THE MUSCLES!

LET "George" HAUL TOTE BOXES

This cleverly designed, easy-rolling hand truck supplies the leverage that "goes to bat" for employee muscles. Attached rigid handle hook is engaged with tote box handle. With little effort and by natural leverage, the box glides over bevel edge of truck onto rollers when truck handle is pulled forward. Load is safely held on upper rollers while truck is rolled to destination on lower set of traction rollers.

No dangerous lifting of metal-laden boxes . . . long life . . . low cost. Most plants can use several . . . one company bought 150 units. Get yours!

*TRADEMARK

LET "George" DO IT

Send for Bulletin N

ROLOCK Inc. • Fairfield, Conn.

4RG33

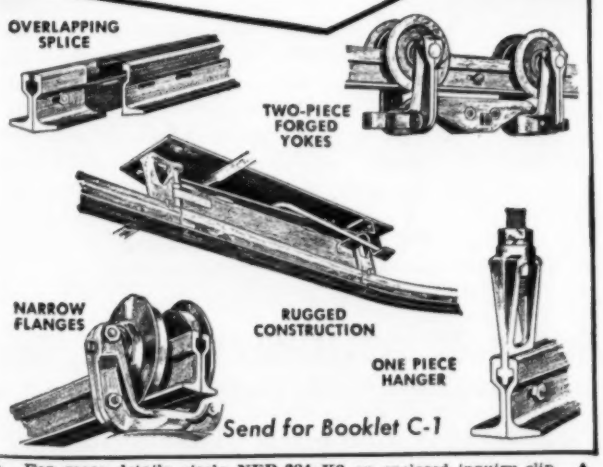
▲ For more details circle NED-283 K3 on enclosed inquiry slip ▲

MONORAIL SYSTEMS FABRICATED TO FIT

American MonoRail is fabricated to fit any handling job. Systems are available for hand or electric operation, including rubber wheel drive with local or remote control providing many automatic features.

AMERICAN MONORAIL CO.

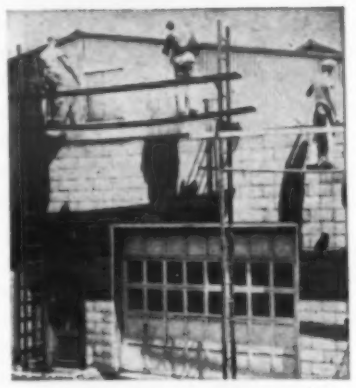
13116 Athens Ave. • Cleveland 7, Ohio



Send for Booklet C-1

▲ For more details circle NED-284 K3 on enclosed inquiry slip ▲

SCAFFOLD BRACKETS & ACCESSORIES allow one man to erect safe scaffold within 10 minutes

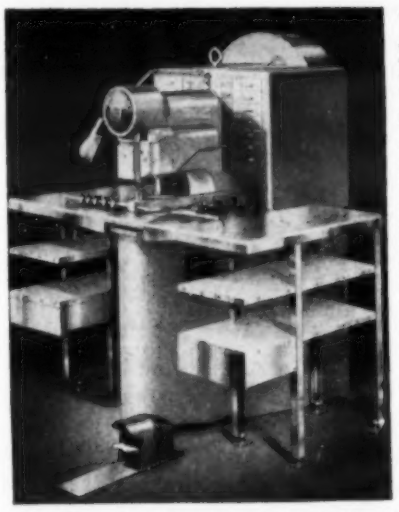


Painting, sheet metal work, wall washing and similar functions common to industrial building maintenance can be speeded up with use of Step-A-Time scaffold brackets and accessories which allow one-man erection of scaffold in 10 minutes. Brackets are furnished in pairs, left and right, and can be fastened to any surface with 16 penny nails or similar hardware. Wing nuts on ladder clamp rod which holds ladder securely in position can be adjusted to locate inside of ladder 6 to 20 in. from building. Stage is laid across ladder rungs, with ladders, not brackets, carrying the weight.

Shelf brackets which will support up to 12-in. wide lumber and guard rail clamps which accommodate 2 x 4 and 2 x 6-in. rail boards are accessories. All pieces are made of steel with welded angle braces. Made by **Beaver Art Metal Corp.**, Dept. NED, Box 792, Ellwood City, Pa.

▲ For more details circle NED-285 K3 on enclosed inquiry slip ▲

SHEET METAL FABRICATOR for punching, notching and nibbling



With improved Hydra-New-Matic head, model 10AA sheet metal fabricator operates at 165 strokes per minute for single hole punching, notching and nibbling. Punches and dies are rapidly interchangeable, and work is done without templates. Tool holders of 1¼ and 3½-in. capacities are available, fitted with adjustable back and side gages for accurate hole location. Independent notching units are equipped with scales and gages adjustable up to 5 in. for corner notches. A nibble lever controls the nonrepeat device for continuous ram operation during nibbling. Illustration shows an adjustable pair of combination work tables and tool racks in "forward" position on each side of the machine. Made by **Wales-Strippit Corp.**, 363 Payne Ave., North Tonawanda, N. Y.

▲ For more details circle NED-286 K3 on enclosed inquiry slip ▲

(Swartwout's duct ventilator)

Give your ventilation a quiet lift with Airlift

FEATURES:

- Certified ratings
- Non-overloading fan wheel
- Lower fan tip speed
- Oversize outlet opening
- Lowest noise levels

Centrifugal type fan in Swartwout-designed ventilator provides powerful efficient exhaust against static pressure; operates at low noise levels. Write for Bulletin AL-C.

18511 Euclid Avenue, Cleveland 12, Ohio

The Swartwout Co.

Roof Ventilators and Ventilating Louvers

POWER PLANT EQUIPMENT • PROCESS INDUSTRY CONTROLS

▲ For more details circle NED-287 K3 on enclosed inquiry slip ▲

HE'S DOING THE WORK OF 3 men IN HALF THE TIME with a GRIPPER WW* SLING

WW*-WOVEN WIRE, new all-purpose sling that's sweeping the materials handling market. Only Gripper Slings are made from WOVEN WIRE!

Using Gripper Woven Wire slings for handling electric motor armatures through repair steps allowed an eastern motor repair shop to cut handling time in half, use only one man where two, sometimes three, were formerly needed!

You'll get equal advantages from Gripper Woven Wire slings in your plant. Use them for heavy, bulky loads, sharp edged pieces, squares, flats or long members...all with equal ease, speed and . . .

GREATER SAFETY

Gripper slings will not snap suddenly. Broken wires will not stick out from the sling to cut workmen's hands. No kinking, tangling, snarling.

Available in standard widths and any length . . . rated and tested for any lifting job. See your mill supply, materials handling or safety equipment distributor for full information . . . or, write direct for FREE illustrated catalog and price list.

The Cambridge Wire Cloth Company

DEPARTMENT R

CAMBRIDGE 10, MARYLAND

WIRE CLOTH | METAL CONVEYOR BELTS | SPECIAL METAL FABRICATIONS

OFFICES IN LEADING INDUSTRIAL CITIES

Distributors—write for open territory data!

▲ For more details circle NED-288 K3 on enclosed inquiry slip ▲

FOSTER

Chrome Sleeve Quick Detachable

COUPLERS

AND HOSE FITTINGS

Price...Lower than most
Quality...None Better
Delivery...Immediate

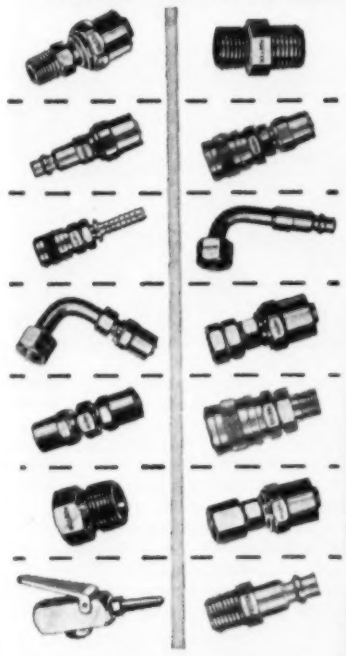
- Reusable Socket Heads for Lower Replacement Cost!
- One Second Hookup Under Pressure!
- Tight-Seal, Dirt-Proof Construction! Leak-proof!
- Instant Automatic Flow! Swivel Action!

Foster Quick Detachable Couplers for pneumatic and hydraulic applications give longer service and cost less than other comparable couplers. Delivery of any order, large or small, is immediate. An order to Foster is faster. Write Dept. 2.

FOSTER MFG. COMPANY, INC.

2850 Gravois • St. Louis 18, Mo.

FOSTER FITTINGS ARE AVAILABLE THROUGHOUT THE NATION



Send for Free CATALOG

ASK US WHY WE RECOMMEND

▲ For more details circle NED-289 K3 on enclosed inquiry slip ▲

AMAZING! the Time and Money Saved WITH Spee-Dee WHITEPRINT OUTFITS

Make Exact Duplicates in as little as One Minute at less than 2c sq. ft.

Inexpensive and simplest of all print making equipment! Thousands in daily use. Enables anyone to make accurate, positive whiteprints from translucent originals. Saves up to 80% of commercial blueprint costs—quickly pays for itself! Makes photocopies, too. Just plug in. Uses diazo (moist or ammonia dry) process. Complete portable *Spee-Dee* outfits in 12" x 18", 18" x 24" and 24" x 36" models. Prices start at $55.00. Also a full line of 42" width capacity volume production whiteprinters at moderate prices.

10 DAY FREE TRIAL

Send today for Free Spee-Dee Brochure

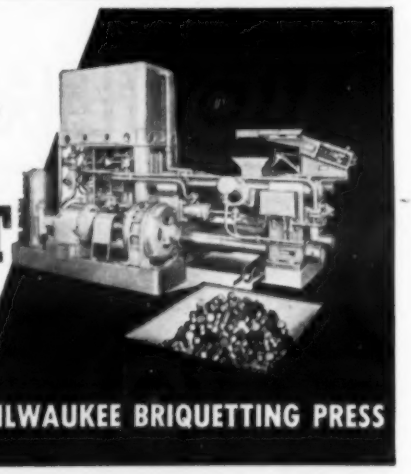
PECK & HARVEY

Mfrs. of Whiteprint, Blueprint & Photocopy Equipment

5638 NORTH WESTERN AVE., CHICAGO 45, ILLINOIS

For more details circle NED-290 K3 on enclosed inquiry slip

PRESS SCRAP INTO PROFIT WITH A MILWAUKEE BRIQUETTING PRESS



Dense cylindrical briquettes produced by the MILWAUKEE briquetting press classify as high grade scrap . . . assure closer control of machineable metals. As a result, briquettes of steel, aluminum, cast iron, bronze, magnesium, brass and other metals can be charged directly into a furnace or foundry cupola. Briquetted turnings, borings and chips are easily stored for future use, reducing dependence on outside material sources.

Profits from converting low-grade bulk scrap are high . . . many users of a MILWAUKEE press write off entire cost of machine in one year! Six models available to meet a wide range of converting requirements.

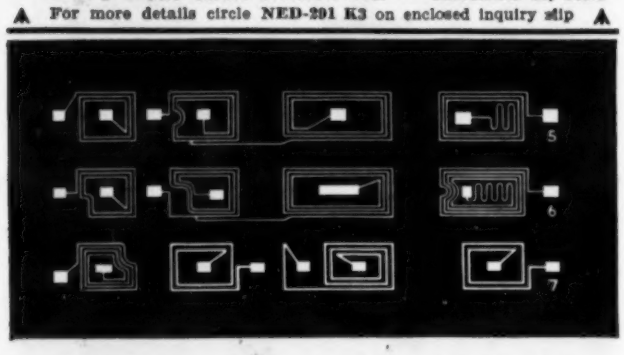
Write today for Bulletin No. 117 for complete details.

1410-B1

MILWAUKEE *Foundry Equipment Division*

6475 GRAND DIVISION AVE. • CLEVELAND 25, OHIO

For more details circle NED-291 K3 on enclosed inquiry slip



FOIL Your Circuit Troubles

. . . and Synthane laminated plastics with copper-foil on one or both sides, is one good way to do so. "Printing" circuits speeds up your operation . . . saves space . . . reduces the possibility of error. Synthane has pioneered in the production of copper clad laminates. Synthane laminated plastics with copper foil have good insulation resistance and are easy to punch or machine. We can supply foil-laminated Synthane in the grade and thickness you need . . . and in the quantity you require. Get complete information on copper-foil Synthane and its place in electronics. Use the coupon today.

SYNTHANE

Manufacturers of laminated plastics

SHEETS
RODS • TUBES
MOLDED-LAMINATED
MOLDED-MACERATED
FABRICATED PARTS

SYNTHANE CORPORATION
N.E. River Road, Oaks, Pa.

Gentlemen:

Please send me information on Synthane laminated plastics and its use in "printed" circuits.

Name_____

Address_____

City_____ Zone____ State_____

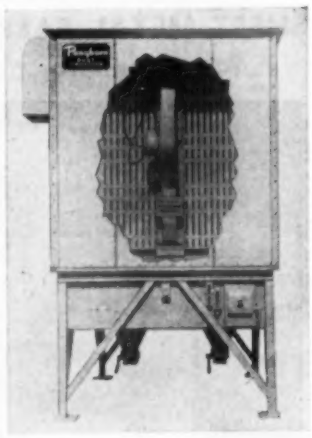
For more details circle NED-292 K3 on enclosed inquiry slip

PORTABLE GREASING UNIT up to 7000 psi pressure developed

Air pressure is used with hand-operated grease gun of this heavy duty Gre-Zer-Ator portable greasing unit which fastens to top of regular 25 to 50-lb original grease container. Using a Hydra-jet pump, power is obtained from sealed compressed air unit without use of air or electrical connections. A few downward strokes on cushioned air cylinder provides sufficient pressure for dependable operation, even with extra-long hose. Depending on weight of grease, pump will hold from 10 to 16 oz. Reverse-about booster allows operator to use either push or pull motion of handle. It will develop pressure up to 7000 psi. Made by **National Sales, Inc.**, 812A N. Main St., Wichita, Kans.

For more details circle NED-293 K3 on enclosed inquiry slip

SELF-CLEANING DUST COLLECTOR traveling reverse-air blower keeps screens clean continuously



By permitting continuous automatic dust collection, constant air volume and suction, and positive reverse flow filter cleaning, type CH-3 self-cleaning cloth screen dust collector assures low operating and maintenance costs. Traveling manifold with integral reverse air blowers takes its air from the clean air side of the collector and blows air through one of three vertical rows of cloth covered screen frames at a time. Normal air flow through two adjacent rows is blocked off. This mechanical action causes dust to be blown from all external surfaces of the filter elements, and it drops into the hoppers. Manifold travels back and forth at slow speeds in both directions. Blower motor is interlocked with the main exhauster motor to insure simultaneous operation.

Standard sizes are furnished with six-screen construction. Also available for small air volume use are four- and five-screen-high by 5-ft long screen sections. Existing installations of type CH cloth screen collectors can be converted readily to self-cleaning types. Made by **Pangborn Corp.**, 140 Pangborn Blvd., Hagerstown, Md.

For more details circle NED-294 K3 on enclosed inquiry slip

Moving or Storing is Rapid, Convenient and Inexpensive with

IRONBOUND SEMI-LIVE SKID PLATFORMS

Ruggedly built with capacities up to 2500 lbs. These units are quickly made mobile with the use of low cost lift jacks . . . One of the methods that Ironbound engineers use to increase production and conserve space at low cost.

SEMI-LIVE SKID WITH BOX TOP

. . . permanently attached or removable. Also available with many other superstructures to "Short-Haul" your products thru production or into storage. Useful in hundreds of spots in every plant.

THE IRONBOUND "SAFETY-SKID" WITH ROUND CORNERS

Ironbound construction assures long hard use with complete safety to product and operator. Still the time proven method for handling of materials efficiently and economically.

IRONBOUND
BOX & LUMBER COMPANY
Materials Handling Division
55 HOFFMAN PLACE • HILLSIDE, N. J.

MANUFACTURERS OF QUALITY BUILT SKIDS, SEMI-LIVE SKIDS, FLOOR TRUCKS, ROLL TRUCKS, DOLLIES AND PRY BARS

For more details circle NED-295 K3 on enclosed inquiry slip

CONTRACTORS SAVE MONEY AND SPEED WORK

WITH ON-THE-JOB USE OF . . .

WHEELER *Electric* SOUND POWERED TELEPHONES

- NO BATTERIES. No outside power.
- LOW in FIRST and LAST COST.
- CLEAR SPEECH. CLEAR SIGNAL.
- ALWAYS READY in EMERGENCY.
- SIMPLE standard WIRING.
- Corrosion-resistant construction.

ASK ABOUT NEW EXECUTIVE-TYPE CRADLE PHONE.

THE **WHEELER** INSULATED WIRE COMPANY, INC.
Division of The Sperry Corporation
1108 East Aurora Street, Waterbury 20, Conn.

10WH53A

For more details circle NED-296 K3 on enclosed inquiry slip

"Lightnin" Mixers

Clean, degrease small parts IN 5 MINUTES!

Twice as fast as hand dipping. Get high-speed cleaning and degreasing, with a LIGHTNIN Mixer in any tank or container.

Mixer makes solvent flow rapidly over and around small parts, castings, etc. Cleans intricate parts thoroughly in 5 minutes. Easily installed in your tank—we show you how. Fully guaranteed. *For details, send for Catalog B-103.*

Mix fluids in a few seconds in any tank or container, with a LIGHTNIN Portable Mixer. Cheaper, faster than hand stirring. Mix paint, glaze, chemicals . . . dissolve powders, crystals . . . blend food products, flavors, syrups—do hundreds of mixing jobs quickly and thoroughly. Fully guaranteed. Thousands in use. Thirty models 1/8 to 3 HP. *Send for Catalog B-75.*

FOR BIG MIXING JOBS

LIGHTNIN turbine and paddle mixers for open or closed tanks. Sizes 1 to 500 HP. Send for Catalog B-102.

LIGHTNIN side entering propeller mixers. Sizes 1 to 25 HP. Send for Catalog B-104.

MIXING EQUIPMENT CO., Inc.
165 Mt. Read Blvd., Rochester 11, N. Y.
In Canada: William & J. G. Greey, Ltd., Toronto 1, Ont.

MIXCO fluid mixing specialists

For more details circle NED-297 K3 on enclosed inquiry slip

ARMSTRONG *Carbide* TOOL HOLDERS

FOR HIGHER SPEEDS, AND HEAVIER FEEDS

ARMSTRONG Carbide Tool Holders and ARMIDE (Carbide Tipped Cutters) come in cased sets for tool rooms and maintenance departments, and individually in all sizes for general machine shop and production turning. They permit not only the ready machining of sand-filled castings, the hardest and toughest steels as well as many heretofore "unmachinable" materials, but also make practical much heavier cuts and cutting speeds up to 600 f.p.m. on ordinary work. They also run from 10 to 100 times as long between regrindings.

WRITE FOR CATALOG

ARMSTRONG BROS. TOOL CO.

"The Tool Holder People"

5245 W. ARMSTRONG AVENUE, CHICAGO 30, U.S.A.

NEW YORK • SAN FRANCISCO

▲ For more details circle **NED-298 K3** on enclosed inquiry slip ▲

---

lightweight fully insulated

CADDY

TYPE B *Electrode Holders*

Connected by the CADWELD PROCESS — the greatest advancement in arc welding in 20 years.

On Display NATIONAL METAL SHOW Oct. 19-23 Booth 3011

CADDY ARC WELDING
ACCESSORY DIVISION
ERICO PRODUCTS, Inc.
2070 E. 61st PLACE, CLEVELAND 3, OHIO

▲ For more details circle **NED-299 K3** on enclosed inquiry slip ▲

Use Schrader flow control valves to improve Air Cylinder Performance

Positive control of compressed air is provided by **Schrader Flow Control Valves**. They control piston speed in either direction without reducing the force.

An adjustment screw permits quick increase or decrease of flow, from zero to full.

Available in five sizes, ⅛" to ¾" thread, and made of corrosion-resisting materials throughout, Schrader Flow Control Valves have simple construction readily serviced without being removed from the line.

Send today for complete information on Schrader Flow Control Valves. They'll help make air a more useful tool in your plant.

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Incorporated
459 Vanderbilt Ave., Dept. E-41, Brooklyn 38, N. Y.

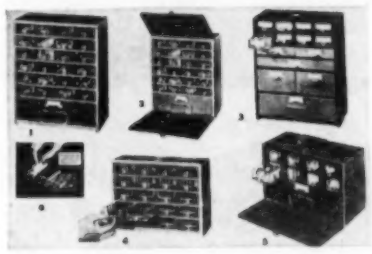
▲ For more details circle **NED-300 K3** on enclosed inquiry slip ▲

PHASE SEQUENCE INDICATOR
covers a range of 30 to 1000 cycles

Designed as a time saver for electricians, maintenance men and engineers, this compact phase sequence indicator covers a frequency range of 30 to 300 or 300 to 1000 cycles at a flip of a switch. It has no moving parts, and can be used to determine polyphase motor rotation, transformer and alternator connections and other similar jobs. It is only necessary to attach the alligator clips to power mains and one of the lights will glow, showing either 1-2-3 or 3-2-1 rotation. Unit can be used on 110, 220, and 440-v lines without modification or the use of external resistors. Made by **United Mfg. Co.**, Hamden, Conn.

▲ For more details circle **NED-301 K3** on enclosed inquiry slip ▲

SMALL PARTS CABINETS
units have 8 to 384 compartments with plastic or steel drawers



Offered in sizes to meet practically every small or medium sized parts storage requirement, Haz-Bin cabinets are made in single units which provide from 8 to 384 separate compartments, with a maximum of three compartments per drawer. They provide indexed storage of parts free from dust, dirt or damage. Welded steel cabinets have gray baked-on enamel finish and can be used side-by-side or stacked. Key-holes on most models permit wall hanging, if desired.

Steel drawers are rustproof and include four sizes. Clear styrene plastic drawers can be subdivided into two or three compartments, and contents are visible. Both plastic and steel drawers have index label slot, and built-in safety catch permits drawers to hang out just right for access to contents without their spilling.

Haz-Bin Jr. cabinets are available in ten models with 8 to 128 plastic drawers and range in price from $4.25 to $55.95. Ten models are offered with combination of plastic and steel drawers and are priced from $12.95 to $57.75. Also available are four portable lightweight carrying cabinets. Frames of all cabinets are 6 in. deep, 12½ or 25 in. wide and from 4 to 30½ in. high depending upon the number of drawers. Made by **Akro-Mils, Inc.**, P. O. Box 989E, Akron 9, O.

▲ For more details circle **NED-302 K3** on enclosed inquiry slip ▲

CLEVELAND *Top Quality* FASTENERS
The Cleveland Cap Screw Company
2917 East 79th Street Cleveland 4, Ohio
Warehouses: Chicago, Philadelphia, New York, Providence
ASK YOUR JOBBER FOR CLEVELAND FASTENERS

▲ For more details circle **NED-303 K3** on enclosed inquiry slip ▲

Don't be surprised

. . . if the HydroLectric Lift Truck makes savings of 50 to 80% in your material handling.

HERE'S WHY...

HYDROLECTRIC is easier to operate because of its finger-tip control that is simplicity at its best.

HYDROLECTRIC does the job safely and quickly with its exclusive Dyna-Dual Power Unit that is quiet, odorless, powerful, rugged, and maintenance is practically nil.

HYDROLECTRIC costs less to operate than any other leading truck, and industry after industry has proved that it pays for itself in 3 months.

Want proof? Write for complete information.

LIFT TRUCKS INCORPORATED
2423-31 SPRING GROVE AVE.
CINCINNATI 14, OHIO

Over 1000 models and sizes

HYDROLECTRIC, HYDROMATIC and RED ARROW LIFT TRUCKS

▲ For more details circle **NED-304 K3** on enclosed inquiry slip ▲

STEP DOWN HIGH VOLTAGE

230
460
575
VOLTS

- *Quickly*
- *Economically*
- *with Minimum Wiring*

PUT JEFFERSON TRANSFORMERS ON YOUR JOB!

LIGHTING CIRCUITS
SMALL MOTORS
CONTROLS
HAND TOOLS

● Installation of Jefferson Power Circuit Transformers at the point where low voltage (115-230V) is required eliminates long secondary feeders, saves copper, conduit, and maintenance costs. Voltage regulation is improved and secondary voltage drop eliminated.

Jefferson *Air Cooled* Transformers are lightweight and compact. They can easily be relocated if wiring or machinery layouts are altered. Sturdy brackets are ideal for wall mounting or mounting directly on machinery.

Stock Sizes: 50 V. A. to 15,000 V. A.—460/230V. Primary—230/115V. Secondary. 575 V. Primary—230-115V. Secondary. Listed by Underwriters' Laboratories, Inc.

JEFFERSON ELECTRIC COMPANY
Bellwood, Illinois
Sold through leading wholesalers.

JEFFERSON ELECTRIC

Jefferson Transformers

▲ For more details circle **NED-305 K3** on enclosed inquiry slip ▲

FASTER-SIMPLER

POSITIVE ANGULAR ACCURACY

the MAGNA-SINE

For any angular set-up, whether single or compound, simply insert standard gauge blocks between the Magna-Sine plates. Proper gauge blocks are indicated in the Robbins Table of Constants. Positive accuracy in a few moments. Work is securely held by magnetic attraction. In two models and sizes; also non-magnetic models for inspection set-ups.

SEND FOR CATALOG

OMER E. Robbins COMPANY

Manufacturers of the MAGNA-SINE and Other Precision Tools

5722 TWELFTH ST. • DETROIT 8, MICH.

For more details circle NED-308 K3 on enclosed inquiry slip

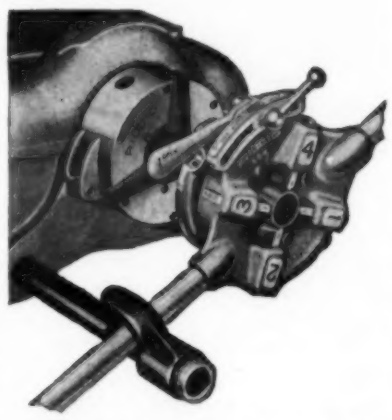
TILTING ARBOR SAW
fence in alignment at all times

Design of the rip fence-fence rail on the model G-110 10-in. tilting arbor variety saw keeps it in alignment at all times. Saw also incorporates a shock-insulated frame, machined and ribbed table, miter gage operation on either side of the saw blade, micrometer fence adjustment to 1/64-in. and fence rail extension that does not affect the fence setting accuracy. Rip fence locks both front and rear and can be locked only when parallel to the saw blade. Maximum thickness of cut is 3⅛ in. and distance from front of table to front of blade at maximum thickness setting is 13⅞ in. Capacity cut to right and left is 25 and 19 in., respectively. Made by **Yates-American Machine Co.**, 731 Third St., Beloit, Wis.

For more details circle NED-310 K3 on enclosed inquiry slip

PIPE THREADER
for use on power drives

For use on power drives, series 504 pipe threader is entirely self-contained and is easily adjusted to thread 1 to 2-in. piping using one set of dies. The quick-opening handle retracts dies instantly without stopping power drive, and dies can be adjusted without removing unit from the machine. Unit fits all standard power drives and includes one set of high speed steel dies and a preset four-jaw centering guide. It will cut oversize, undersize and extra-long threads. Made by **Ridge Tool Co.**, 125 Ridge Rd., Elyria, O.



For more details circle NED-311 K3 on enclosed inquiry slip

Filing Photographic Negatives

Eastman Kodak Co.—"Filing Negatives and Transparencies" is a 20-page illustrated booklet of interest to those who must keep these items properly filed for ready reference. It outlines methods of classifying, identifying and storage in both large and small quantities. Sources of photographic filing materials are listed.

For more details circle NED-312 K3 on enclosed inquiry slip

HANDY SANDBLAST... Low Price

Widely used for cleaning dies, tools, pistons, piston rings, valves and other small parts. It can be used with soft abrasives, such as ground corn cobs or nut shells, or with hard abrasives such as sand, aluminum oxide, steel grit or shot. Soft abrasives will remove surface impurities without cutting into metal. Hard abrasives will clean and prepare surfaces for any kind of coating.

This unit is designed to be placed on a workbench, connected to a compressed air line and to a 110 V. lighting circuit. It has two lighting fixtures, and an exhaust fan with large dust bag for making the operation dustless. Two armholes with rubber sleeves and gloves permit the operator to handle the work under the blast gun. The cabinet can be operated from a standard 5 H.P. 2-stage garage compressor.

Made by The W. W. Sly Manufacturing Company, 4748 Train Avenue, Cleveland 2, Ohio. Advt.

For more details circle NED-314 K3 on enclosed inquiry slip

These Simple Units Add Up to INCREASED PROPERTY PROTECTION and LOWER INSURANCE RATES!

THE CHICAGO WATCHCLOCK SYSTEM

Quickly Pays for Itself!

The CHICAGO WATCHCLOCK system is so reliable, users are given lower insurance rates. The CHICAGO System enables reliable watchmen to PROVE they're on the job. It keeps a permanent record of their performance ... YOU get extra protection against FIRE, THEFT and SABOTAGE.

Send for FREE booklet that explains the operation of the CHICAGO WATCHCLOCK System and how this low-priced installation is made quickly with only a screw driver! Write to

CHICAGO WATCHCLOCK
Division Great Lakes Industries, Inc.

1522 S. WABASH AVE., CHICAGO 5, ILL.

Offices in Principal Cities

For more details circle NED-309 K3 on enclosed inquiry slip

CHECK... AND COMPARE!

CHAMPION'S EXTRA FEATURES

DOMED PISTONS AND CYLINDERS • SPECIAL PLATE VALVES • STRAIGHT-LINE AIR FLOW • THIN, DEEP COOLING FINS • SPECIAL AFTER-COOLER • NO-LOAD STARTING • TWO MAIN BEARINGS • SIMPLE MAINTENANCE

aero-dynamic design for...

54 MODELS
- ¼ hp to 10 hp units
- horizontal or upright
- stationary or portable
- electric or gasoline

longer life . . . maximum pressure . . . minimum running costs

The air compressor system is a mighty important unit of plant equipment. Many vital production operations depend on it. Whether you plan to add additional compressor equipment — or replace obsoleted units, you should be sure that your new compressor will give you *endurance* PLUS *dependable performance* PLUS *economy*.

These qualities are determined by many things, principally by the materials, workmanship and design of the compressor—not by any single feature. That's why we ask that you *check* and compare the *Extra* CHAMPION *Features* before you make your choice. Check point-by-point and you can't help but pick—the "Champ" of compressors—a CHAMPION.

AIR HOSE REELS
The Hose Reel speeds up work, prevents accidents and saves on air and water hose replacements. May be mounted on ceiling, wall or floor.

WRITE TODAY FOR your FREE copy of the Champion catalog

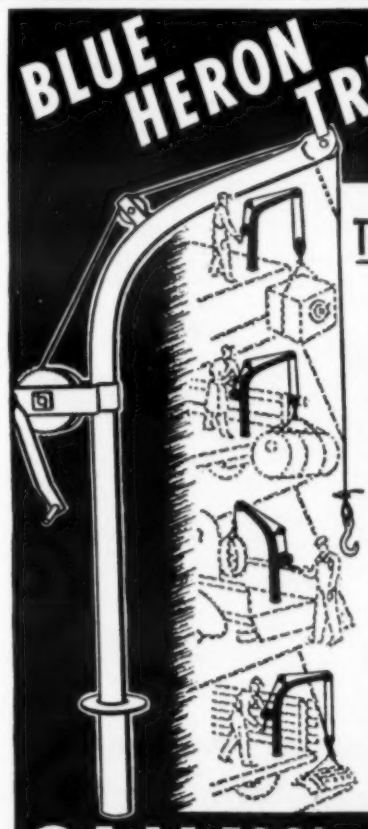
103

CHAMPION PNEUMATIC MACHINERY CO.
837 No. Pleasant St. Princeton, Illinois

PRESSURE CLEANERS • AIR HOSE REELS • AIR ACCESSORIES

For more details circle NED-313 K3 on enclosed inquiry slip

BLUE HERON TRUCK CRANE SAVES



Time Money Labor

ONE MAN can handle up to ONE TON —EASILY and SAFELY!—with a BLUE HERON TRUCK CRANE. Crane swivels through full circle; one man can lift from socket, leaving truck body clear.

Equip ALL company trucks with sockets. Then change cranes from truck to truck.

CHOOSE THE MODEL WHICH FITS YOUR REQUIREMENTS
Model O.C. 30A Cap. 500#
Model O.C. 30B Cap. 1000#
Model O.C. 30C Cap. 2000#

CAM TOOL CO., INC. 11 RANDWICK AVE. OAKLAND 11, CALIF.

For more details circle NED-315 K3 on enclosed inquiry slip

EC&M TYPE ZHS STARTERS

complete protection for 2300-5000 volt motors

Front and rear view of 4 EC&M 2300 Volt Starters in Sun Oil Company's Sun Station Terminal at Nederland, Texas.

EC&M Type ZHS 2300-5000 Volt Starters have high interrupting capacity (50,000 KVA including the d-c component) for safe and complete protection of the motor and its circuit.

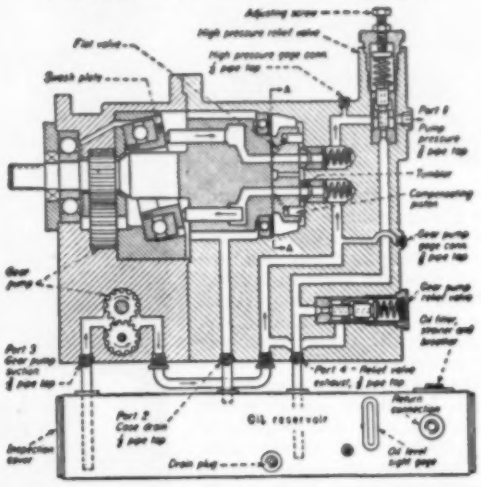
They are available in standard, weather-proof and Type VIII construction for hazardous locations — completely described in Bulletin 1062. Write for copy.

THE ELECTRIC CONTROLLER & MFG. CO.
2698 East 79th Street • Cleveland 4, Ohio

For more details circle NED-316 K3 on enclosed inquiry slip

HEAVY DUTY HYDRAULIC POWER PUMPS

Pressures to 3000 & 5000 psi



The Oilgear Company announces three new "Fluid Power" heavy-duty constant delivery axial piston pumps. Similar components have been tested and proven in more than 100,000 installations without a single failure on record. Features of these fluid power generators are: patented balanced small flat valves with controlled oil film between working surfaces; patented small one piece rolling pistons; patented quiet reverse flow relief valves; 100% supercharge that minimizes oil compression, prevents air entry and assures quieter operation. These units in pressures up to 3000 and 5000 psi are especially suited to heavy duty pushing, pulling, lifting, lowering and maintaining high static loads on large clamping rams; for use in the iron, steel, metal working, plastic, automotive, rubber, printing, lumber and textile industries. For illustrated descriptive and application data, write for Bulletin 46601. THE OILGEAR COMPANY, Dept. A, 1582 West Pierce Street, Milwaukee 4, Wisconsin. *Advt.*

▲ For more details circle **NED-317 K3** on enclosed inquiry slip ▲

Model 8C's smooth, clean-cut design eliminates the multitude of clothes-catching, dirt-catching and knuckle-barking projections common to conventional metal cutting band saws.

AN ALL-NEW DESIGN . . .

FIRST TO MEET TODAY'S METAL CUTTING NEEDS!

You'll get performance never before available when you get the ALL-NEW Model 8C band saw. Designed to meet your metal cutting needs today—and for a *long time* to come—Model 8C embodies years of *Kalamazoo* experience in the field and the best industrial design talent.

Once you've *seen* the new 8C, you'll agree it has everything you've been looking for in an 8-inch metal cutting band saw. Ask your dealer for a demonstration *soon*—or write today for descriptive literature and the name of your dealer.

MACHINE TOOL DIVISION

Kalamazoo TANK and SILO CO.

1012 HARRISON ST., KALAMAZOO, MICHIGAN

▲ For more details circle **NED-318 K3** on enclosed inquiry slip ▲

This Free Book

tells you how to speed-up grinding and polishing 300%

Here's valuable information on how to grind and polish better—faster—cheaper ...how to eliminate herringbone patterns and swirl marks . . . how Nu-Matic Air-Inflated Grinders provide up to 3,000% greater abrasive contact area than hard-type wheels. Send today for Nu-Matic Book No. 6353. N-104

NU-MATIC GRINDERS, INC.

8223 Carnegie Ave. • Cleveland 3, Ohio

▲ For more details circle **NED-319 K3** on enclosed inquiry slip ▲

PORTABLE PIPE BENDER

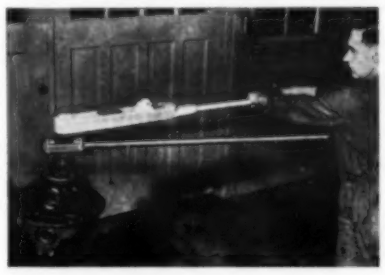
power supplied by electric drill

Capable of bending ½ to 1¼-in. pipe to 180 degrees at rate of 60 bends per hour, No. 60 portable bending machine is driven by a 115-v universal motor powered ¾-hp portable electric drill. Limit switches are preset at factory for 0 and 180 degrees to prevent overtravel in forward or reverse direction. Die forms are changed easily for various pipe sizes. Tool can be used anywhere, or it can be mounted on a bench or clamped in a vise. Made by **Wallace Supplies Mfg. Co.,** 1302-08 Diversey Pkwy., Chicago 14, Ill.

▲ For more details circle **NED-320 K3** on enclosed inquiry slip ▲

TORQUE WRENCH

for heavy duty service



Having a capacity of 0 to 1000 lb-ft, this heavy duty torque wrench is suitable for servicing axles and transmissions of trucks, cars and mobile equipment as well as for other work in this range. Stay-set dial shows exactly when proper tension is reached and holds reading after pulling has ceased to check tension. Turn of center knob resets the dial to zero. Forged steel sockets and an adapter to cover most high range torquing requirements are available singly or in sets. Made by **Manzel,** 302 Babcock St., Buffalo 10, N. Y.

▲ For more details circle **NED-321 K3** on enclosed inquiry slip ▲

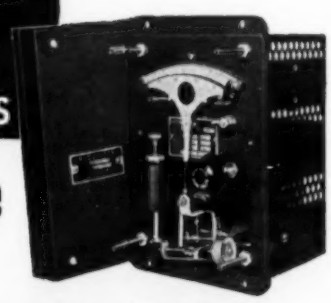
TEMPERATURE SWITCH

snap action, ranges to 300° F

Numbered 3-C1200, this snap-action single-pole double-throw Tempswitch is available in four standard ranges between 70 and 150° F, and also in other special ranges up to 300° F. It combines direct and reverse actions, and measures 2¼ x 1 in., weighing 1.2 oz. Sensitivity is plus or minus 4° F. Unit is installed in a ½-in. diameter hole and acts as the result of the thermosensitive liquid in lower case moving a plunger to actuate the switch. An adjusting screw alters the operating point by 7° F per turn. Unit is UL approved. Made by **Scaico, Inc.,** Dept. N, Market St., Palmyra, N. J.

▲ For more details circle **NED-322 K3** on enclosed inquiry slip ▲

Rocking Contact
V-00 & 221
VOLTAGE REGULATORS



Fast . . . Accurate Response

ON SMALL GENERATORS

Rocking Contact voltage regulators are available in two types for use on small ac generators with direct-connected exciters — TYPE V-00 for generators to 157 kva maximum at 3600 rpm; TYPE 221 for generators to 438 kva maximum at 3600 rpm.

Rocking Contact voltage regulators operate directly in the exciter field circuit to give fast response to voltage changes. No sluggish, time-wasting relays. No vibrating or sliding contacts to wear out. A small movement of the *Rocking Contact* sector over a curved commutator covers the entire regulating range

Write for Bulletin 14B6143A, Allis-Chalmers, Milwaukee 1, Wis. A-4048

Rocking Contact is an Allis-Chalmers trademark.

Movement of a fraction of an inch changes the field resistance from "all out" to "all in" position in very fine steps.

ALLIS-CHALMERS

▲ For more details circle **NED-323 K3** on enclosed inquiry slip ▲

loosens frozen parts

11,500 industrial users depend upon this amazing new chemical tool when some frozen parts tie up valuable machinery or threaten production. They say . . .

"Kroil will loosen almost anything from an embalmer's needle to a bulldozer."

"We have excellent results loosening stuck slides on musical instruments."

"On a 25-year-old Bessemer gas engine, two bolts twisted off before . . . after using Kroil, they all came out easily."

"Before trying Kroil on heat treat trolleys we broke off every nut . . . since then, we have not lost one."

You too can get these results. Try KROIL on money-back basis. Gallon, $3.85; with Kroiler squirt gun, $4.95, f. o. b. factory.

Ask for GENIUS AT WORK—a free publication full of ideas for maintenance men.

KANO LABS. 1074 S. THOMPSON LANE NASHVILLE 11, TENN.

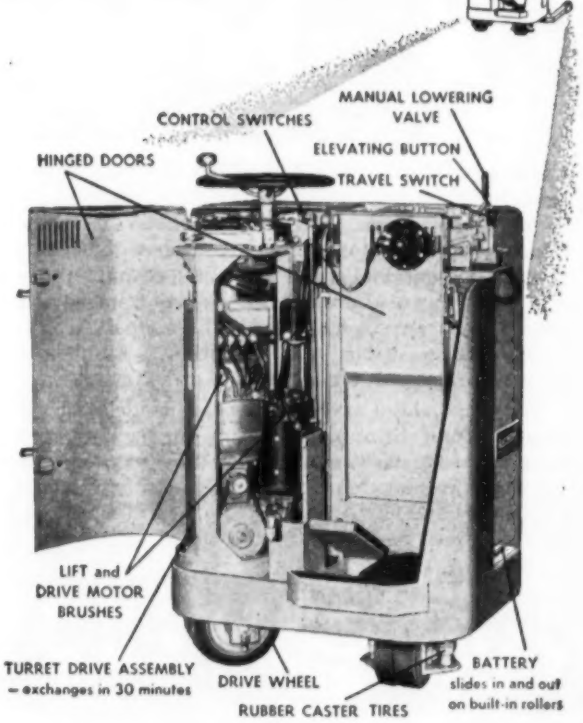
▲ For more details circle **NED-324 K3** on enclosed inquiry slip ▲

NEW

RAYMOND

POWER UNIT*

Opens up like a book for fast, easy servicing



IT'S HERE . . . the day you can service an electric truck as easily as you'd open a book. Because all parts on this new Raymond Power Unit are housed behind hinged double doors. There's nothing under the unit to inspect or service, except the wheels.

This great unit now is furnished on all Raymond Electric Trucks. No other truck offers you a power unit like it! It's the same time-tested power unit developed and used by Raymond for the past 4 years. Only the working mechanism has been re-arranged for easier maintenance, plus rider comfort.

Send For Bulletin Get the facts on the new Raymond Power Unit before you buy your next industrial truck. Mail this coupon today! *Patent No. 2,564,002

The RAYMOND CORPORATION

4121 Madison St., Greene, N.Y.

Please send me Bulletin, describing your new Power Unit.

NAME_____ TITLE_____

COMPANY_____

STREET_____

CITY_____ STATE_____

▲ For more details circle **NED-325 K3** on enclosed inquiry slip ▲

WATER PICK-UP

with SPENCER HARTFORD VACUUM

Any Spencer Vacuum System will pick up liquids—after scrubbing, accidental spillage or floods and from sump tanks. For large volume pick up, special collector tanks from 6 to 100 gallons capacity or liquids may be discharged direct to the sewer.

Spencer also picks up hot materials, reclaims metals and of course will clean large industrial areas and your offices in a remarkably short time. Bulletin on request.

THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT

SPENCER HARTFORD

466-P

For more details circle NED-326 K3 on enclosed inquiry slip

$20,000 saved yearly in packing gas meters

Costs were slashed from $25,000 to less than $5,000 annually at American Meter Co., Philadelphia by developing a new method of packing meters using the Stanley Steel Strapping System. Instead of packing them in conventional crates and boxes, gas meters are now steel-strapped between two wooden frames using plain boards as corner pieces. This method is fast, easy, economical. No nails are needed. Lumber is reused in return shipments to the company.

Very substantial savings are being made with the Stanley Steel Strapping System in packing and shipping products of every type. Why not see how much the Stanley Man can save *you?* He'll install the Stanley Steel Strapping System on a 30-day trial. No obligation. Just mail the coupon below.

STANLEY STEEL STRAPPING SYSTEM*

Reg. U.S. Pat. Off.

*A MAN thoroughly experienced in steel strapping applications—the Stanley Packing and Shipping Engineer.

A METHOD adaptable to any requirement — the Stanley Steel Strapping System, with representatives in 32 principal cities.

HARDWARE • TOOLS • ELECTRIC TOOLS • STEEL STRAPPING • STEEL

THE STANLEY WORKS, Steel Strapping Division
209 Lake St., New Britain, Conn.

☐ Yes — the 30-day trial interests me. Have the Stanley Packing and Shipping Engineer call.

☐ Send me complete information about the Stanley Steel Strapping System.

(Please write name and address in margin of page)

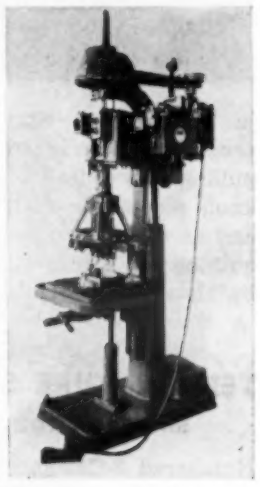
For more details circle NED-327 K3 on enclosed inquiry slip

FORK LIFT TRUCKS rated at 7500-lb capacities

With an overall length (less forks) of 100½ in., wheel base of 60 in., and width of 42 in., these lift trucks can turn in a 77¼-in. intersecting aisle and have a rated capacity of 7500 lb. Either gasoline or diesel engines are available, also all standard lift heights. All side panels, rear and top can be quickly removed for access to parts, and the 12-in. diameter industrial quick-change clutch can be changed in 30 minutes. Other features include single lever full range gear shift; center point automotive type steering; full front vision instrument panel; hydraulic brakes; all-roller rolled-steel mast; and self-aligning lift cylinder. Units can be equipped with cushioned or solid rubber tires. Made by **Buda Co.**, Dept. LF, 15440 Commercial Ave., Harvey, Ill.

For more details circle NED-328 K3 on enclosed inquiry slip

DRILLING-TAPPING MACHINE heavy duty floor models have controlled air-powered thrust



Two models in line of heavy duty drilling and tapping machines are equipped with electrically controlled air-powered thrust. Model C-16 Air Thrust drilling machine and model C-16-T Air Thrust drilling and tapping machine are box column, floor stand types with sliding heads and adjustable work tables and bench and table combinations having two, three and four head units. Drilling-tapping machine performs single and multiple tapping direct from the drill chuck or multiple drill head without employing a clutch or lead screw. Precise control of air thrust at low pressures assures sensitive tapping action. When predetermined depth of stroke is reached, spindle starts to ascend at same instant motor is reversed. By switching out the reversing controls, machine can be used for drilling.

Both machines are equipped with dual air cylinder transmission. Approach speed, return speed and working thrust are infinitely variable and adjustable. Limit switches and instant-acting Hi-Cyclic air valve gives reliable depth control. Hydraulic dashpot controls drill break-through. Stroke length is 4 in., with 6-in. optional. Drilling capacity is ¾-in. in mild steel. Made by **Beckett-Harcum Co.**, 1139 Wayne Rd., Wilmington, O.

For more details circle NED-329 K3 on enclosed inquiry slip

SAFETY EQUIPMENT FOR ALL INDUSTRIES

IPCO M and M RAIL CLAMPS

For car stops, on loading platforms, temporary sidings, cars on grades, and traveling cranes . . . Used and recommended by leading Steel Companies, Manufacturing Plants, Mines, Grain Elevators, Cement Plants and Quarries.

WRITE FOR BULLETIN NO. 44

IPCO Safety Equipment for all Industries

INDUSTRIAL PRODUCTS COMPANY

2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

For more details circle NED-330 K3 on enclosed inquiry slip

NOW! Accurate Level Control with NO Maintenance!

Photoswitch Electronic Liquid Level Controls have no vacuum tubes — no floats — no moving parts to wear out. So you are sure of accurate level indication and control . . . maintenance-free for unlimited life. Electrolysis is eliminated — probe voltage is less than ½ volt A.C.

UNIVERSAL: pump up — pump down — low level — high level! Two probe rods are suspended into a tank or vat of any size. For a typical pump-up operation: When liquid level falls below lower probe, the control switches on pump motor; when liquid touches upper probe, control shuts off motor. Learn more about this money-saving process control — write for Liquid Level Control Bulletin NA 10.

PHOTOSWITCH INCORPORATED

77 Broadway, Cambridge 42, Mass.

Offices in all principal cities

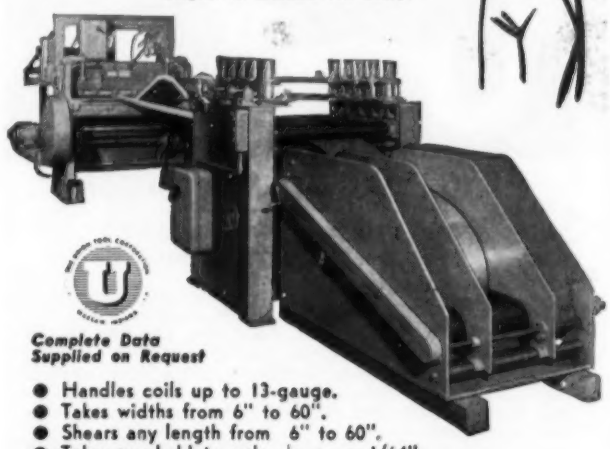
For more details circle NED-331 K3 on enclosed inquiry slip

WITH ONLY ONE OPERATOR THIS UNION MACHINE

- DE-COILS
- LEVELS
- SHEARS
- STACKS

CUTS LABOR COSTS AUTOMATICALLY

CUTS MATERIAL COSTS Buy in coils and cut sheet lengths as needed. No delay.



Complete Data Supplied on Request

- Handles coils up to 13-gauge.
- Takes widths from 6" to 60".
- Shears any length from 6" to 60".
- Tolerance held to only + or — 1/64".
- Only one adjustment to change lengths.
- Speeds to 150 l.f.p.m. depending on lengths cut.
- Neatly stacks sheared pieces automatically.
- Will handle steel, aluminum, etc.

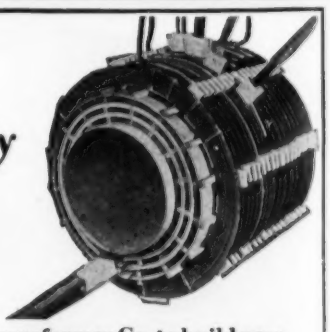
UNION TOOL CORP.

318 E. MARKET ST., WARSAW, IND., U. S. A.

USERS SAY UNION CUTS COSTS, SPEEDS PRODUCTION

For more details circle NED-332 K3 on enclosed inquiry slip

class h insulation *by* National Vulcanized Fibre Co.



used by Pennsylvania Transformer Co. to build new, safe, and reliable Sealed Dry Type Transformers

Using Class H Insulation (Phenolite silicone-fiberglas laminate), the Pennsylvania Transformer Co. (a McGraw Electric Co. Div.) builds Sealed Dry Type Transformers having many superior and safe features. The Class H Insulation eliminates hazards of fire and explosion, permits up to 50 per cent weight reduction, makes possible efficient operation in humid atmosphere, reduces maintenance, allows operation at high temperatures, and permits frequent overloads. Perhaps you have an insulating problem which we can help you solve . . . economically. Write us—our engineering service is immediately available.

National Laminated Plastics
nationally known—nationally accepted

NATIONAL VULCANIZED FIBRE — A tough, horn-like material with high dielectric strength. Excellent machinability. Sheets, Rods, Tubes, Special Shapes.

PHENOLITE Laminated PLASTIC — Good electrical insulating material with great mechanical strength; moisture resistant. Sheets, Rods, Tubes, Special Shapes.

NATIONAL VULCANIZED FIBRE CO.

Wilmington, Delaware — Offices in Principal Cities

Since 1873

For more details circle NED-333 K3 on enclosed inquiry slip

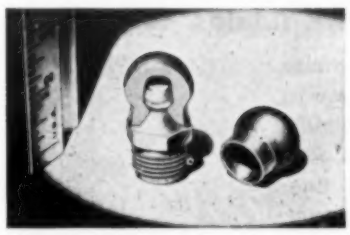
For more details circle NED-334 K3 on enclosed inquiry slip

SNOW THROWER
17-in. self-propelled model

Capable of propelling itself through snow as deep as 16 in., the Snow Hound snow plow handles snow at a rate up to 60 shovel loads per minute. Snow is thrown from 10 to 15 ft to right or left, depending on hand adjustment of chute. Machine is powered by a 2.5 hp four-cycle gasoline engine with automatic centrifugal clutch. Engine features a carburetor heater for quick starting and prevention of icing. Heavy 11-in. cast iron wheels with deep lugs provide good gripping surface on ice or snow. Made by **Toro Mfg. Corp.**, Snelling Ave., Minneapolis 6, Minn.

For more details circle NED-336 K3 on enclosed inquiry slip

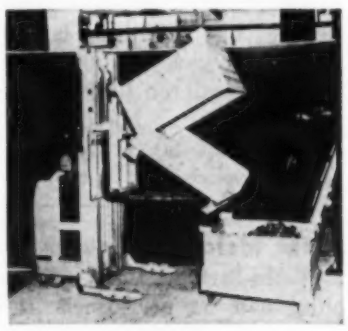
GREASE-FITTING COVER
excludes dirt and abrasives



Made of oil resistant Neoprene, Zurpak cover for Zerk or Alemite grease fittings keeps fitting clean and eliminates danger of excessive wear from dirt particles normally forced into the unprotected fittings with each application of grease. Covers are easy to snap on or off. Made by **Winner Mfg. Co.**, P. O. Box 945-3, Ft. Wayne 1, Ind.

For more details circle NED-337 K3 on enclosed inquiry slip

DUMP BOX ATTACHMENT
for narrow aisle electric trucks



Designed for Raymond rider type, narrow-aisle electric trucks, this dump box attachment facilitates feeding small parts to machines in close quarters and congested areas. Bottom section of the dump box is hinged at the rear and controlled by an independent ram. As the back of the box is elevated, the front opens to discharge the small parts at the machine. Attachment is available as extra equipment for electric trucks made by **Raymond Corp.**, 41115 Madison St., Greene, N. Y.

For more details circle NED-338 K3 on enclosed inquiry slip

Here's the easy way to spot railroad cars

It's no back-breaking job to move railroad cars—when a Link-Belt Car Spotter is on the job. One man can take two or three turns of rope on the motor-driven capstan—and spot cars right where they're wanted. Cuts loading and unloading time. Reduces demurrage charges. Two sizes: 5 and 10 hp, developing 5,000 and 10,000 pounds of rope pull, portable or stationary models.

Link-Belt offers a complete line of car spotters . . . also specializes in drum type puller applications.

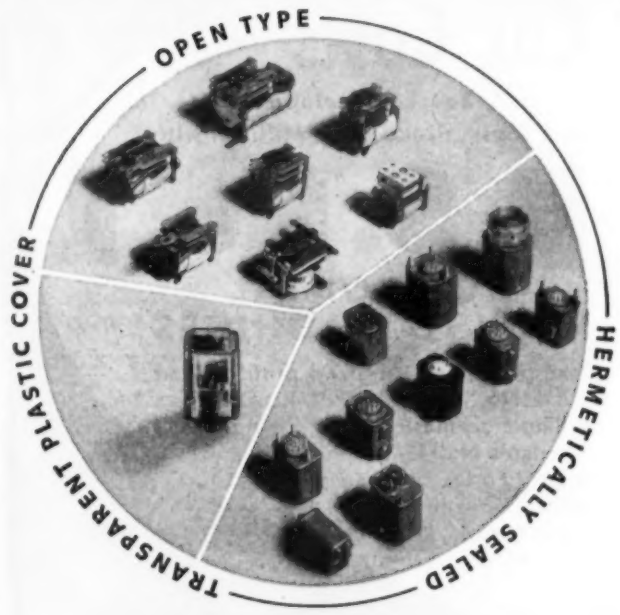
Cuneo Press, Chicago, has used Link-Belt Car Spotters for 20 years.

LINK-BELT
CAR SPOTTERS

Write today for fact-packed Book 2092

LINK-BELT COMPANY: Plants: Chicago, Indianapolis, Philadelphia, Colmar, Pa., Atlanta, Houston, Minneapolis, San Francisco, Los Angeles, Seattle, Toronto, Springs (South Africa), Sydney (Australia). Sales Offices in Principal Cities. 13,161

For more details circle NED-340 K3 on enclosed inquiry slip



R-B-M Relays

FOR EVERY ELECTRONIC APPLICATION

Meeting Commercial and Government Requirements

OPEN TYPE. Circuit switching — power and dyna-motor loads — plate circuit — low capacitance.

HERMETICALLY SEALED. Stud or bushing mounting — solder or plug-in headers — circuit switching — power — low loss applications.

TRANSPARENT PLASTIC COVER. Most R-B-M relays now available in low cost transparent plastic cover.

OTHER PRODUCTS: Motor starting relays and overload protectors for refrigeration, appliance and general purpose motors. Industrial contactors and across-the-line starters. NEMA size 1 and smaller. Low cost general purpose relays. Low voltage D.C. manual and magnetic devices.

Let R-B-M engineering and production facilities serve you. Contact us immediately—Phone 5121

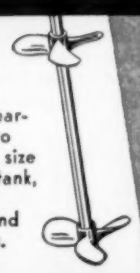
Write Dept. K-10 for ASR Bulletin

RBM
R-B-M DIVISION ESSEX WIRE CORP.
Logansport, Indiana
MANUAL AND MAGNETIC ELECTRIC CONTROLS FOR AUTOMOTIVE, INDUSTRIAL, COMMUNICATION AND ELECTRONIC USE

For more details circle NED-335 K3 on enclosed inquiry slip

Your ALL-PURPOSE BATCH TYPE Mixer
FOR CONTINUOUS SERVICE

TYPHOON



Constant-duty motor—widely spaced ball bearings—adjusts to fit almost any size and shape of tank, at any angle. Direct drive and geared models.

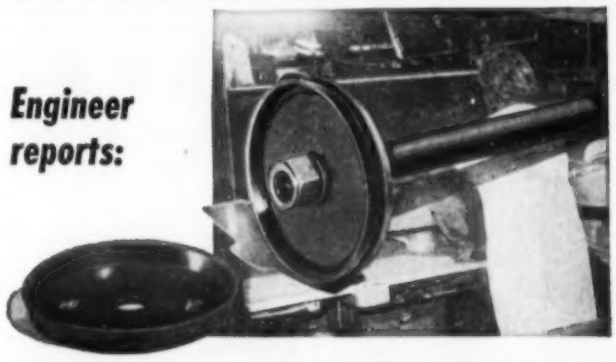
LIGHTWEIGHT
STURDY
HIGH QUALITY
at moderate cost

WRITE FOR BULLETIN!

The Patterson Foundry and Machine Company
East Liverpool, Ohio, U. S. A.
NEW YORK, BOSTON, BALTIMORE, PHILADELPHIA, PITTSBURGH, DETROIT, CINCINNATI, CHICAGO, ST. LOUIS, HOUSTON, DENVER, LOS ANGELES, SAN FRANCISCO, SEATTLE.
The Patterson Foundry and Machine Company, (Canada) Limited
Toronto, Canada
MONTREAL

For more details circle NED-339 K3 on enclosed inquiry slip

Engineer reports:



"Maintenance practically eliminated with J-M Moulded Packing Cups"

A large laundry (name on request) encountered excessive downtime on presses, for maintenance of packings. When they changed to J-M Moulded Packing Cups, packing life was greatly increased, downtime drastically reduced, danger of soiling laundry from servicing packings eliminated.

J-M Moulded Packing Cups are made in many compositions to meet a wide range of pressures, temperatures and service conditions. For details write to Johns-Manville, Box 60, New York 16, N.Y. In Canada, 199 Bay St., Toronto 1, Ontario.

Johns-Manville PACKINGS and GASKETS

For more details circle NED-341 K3 on enclosed inquiry slip

CUT... OPERATING — MAINTENANCE — SPOILAGE COSTS!

ON YOUR TAPPING JOBS!

NEW "TRU-GRIP" TAP HOLDER

Procunier Tappers are the last word in economical, efficient, high speed tapping. Only Procunier has the unique construction features that permit inexperienced operators to tap like experts. Procunier Tappers provide many extra hours of continuous, accurate tapping without frequent "down-time" interruptions. Procunier Tappers are producing more—with fewer rejections, fewer spoiled pieces and a minimum of broken taps.

Only Procunier provides: new sensitive double cone friction clutch; soft cushioned action driving pressure; ball-bearing equipped; heat treated gears; special balanced gear reversing mechanism; smaller-lighter more accurate tru-grip tap holder; and many others.

Write for FREE Brochure

Giving full particulars on the complete line of Procunier Tapping Machines. Learn how you can adapt them to your specific needs.

PROCUNIER SAFETY CHUCK CO.
18-20 S. Clinton St., Chicago 6, Ill.
Dept. 10

Gentlemen: Please send your illustrated brochure giving complete details, specifications and prices on the improved line of Procunier High Speed Tapping Heads.

Name .....
Address .....
City ..... Zone ..... State .....

Procunier
Safety Chuck Company
18-20 S. Clinton St., Chicago 6, Ill.

For more details circle NED-342 K3 on enclosed inquiry slip

UNIVERSAL DRILL BUSHINGS

the production-tools' best friend

reduce tool wear

help prevent tool breakage

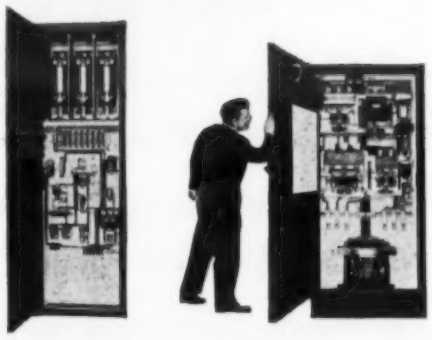
prolong tool life

Universal Bushings help keep tool costs down for several reasons: their superfinish bore helps reduce tool wear • their blended radius helps prevent tool hang-up and breakage • their 100% concentricity and hardness tests insure accuracy and uniform high quality • their knurled heads provide quick, sure grip • available in a complete range of standard diameters and lengths • For complete information, write to the office nearest you — Universal Engineering Sales Co., 1060 Broad St., Newark 2, N. J.; 5035 Sixth Avenue, Kenosha, Wis. — or the home office.

UNIVERSAL ENGINEERING COMPANY
FRANKENMUTH 5, MICHIGAN
176-A

For more details circle NED-344 K3 on enclosed inquiry slip

STARTERS FOR BIG MOTORS



The motor starters, shown above, are examples of the many big units in the Allen-Bradley line. Various types of manual or automatic starters for synchronous motors are available . . . up to 900 hp, 4600 volts maximum. High voltage squirrel cage automatic motor starters are listed up to 700 hp, 2000 to 4600 volts. Relays and contactors are time tested A-B designs. If you need starters for big or small motors, specify Allen-Bradley.

Allen-Bradley Co.
1334 S. Second St., Milwaukee 4, Wis.

ALLEN-BRADLEY QUALITY
MOTOR CONTROLS

For more details circle NED-345 K3 on enclosed inquiry slip

BRAZE HARDENED PARTS SAFELY... with EASY-FLO

With this low-temperature silver brazing alloy you can join hardened parts without appreciably affecting their hardness. That's because EASY-FLO's low brazing temperature, plus its remarkably fast penetration the instant this temperature is reached, greatly reduce the amount of heat and heating time required. Use of "chill bars" helps to make doubly sure of preserving hardness.

FOR EXAMPLE — At left is a hardened steel part of a ticket vending machine to which 2 brackets are brazed with EASY-FLO 3/64" wire. Part is held between 2 copper chill bars, one of which has a clamp screw. There's no appreciable change in hardness of the part.

Photo and information courtesy of SALKOVER METAL PROCESSING of NEW YORK, INC.

FIND OUT *what EASY-FLO brazing will do for you. Get full details in BULLETIN 20. Write for a copy today.*

HANDY & HARMAN 82 Fulton St., New York 38, N. Y.
Distributors in Principal Cities. In Canada: Handy & Harman of Canada Ltd., Toronto

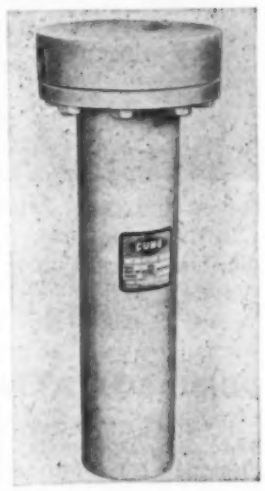
For more details circle NED-346 K3 on enclosed inquiry slip

NUT RUNNING SOCKET will engage nut while turning

Designed for use on air or electric powered drive tools, this hexagonal socket permits the operator to engage and drive nuts without stopping the tool. It is particularly suited for automobile wheel assembly and other mass production applications. It can be applied at a slight angle in order to run nuts close to obstructions, is alloy steel and is available in ½ and ⅝-in. drive sizes. The ½-in. square drive is furnished in regular and deep lengths to fit ½ to 1 11/16-in. nuts. The ⅝-in. drive fits nuts of 1/16 to 1½-in. in the regular length and of ¾ to 1⅛-in. in the deep length. These sizes run in increments of 1/16-in. Made by **Cornwell Quality Tools Co.**, 1040 Cleveland Ave., Mogadore, O.

For more details circle NED-347 K3 on enclosed inquiry slip

HIGH PRESSURE FILTER for service with liquids and gases



Available in standard units for operating pressures up to 1000 psi, high pressure liquid and gas filters have been added to the Micro-Klean line. Units for higher pressure service are also available. Construction is all-welded steel with headpiece machined from bar stock. Pipe sizes for inlet and outlet are ⅜, ½ and ¾ in. Filtration degrees are 10, 25, 50 and 75 microns. Maximum liquid capacity at 150 SSU, 2-lb pressure drop, and 50-micron degree of filtration is 15 gpm. For gases at 1000 psig, 2-lb pressure drop and 25 degree micron filtration, maximum capacity is 200 scfm free air. Made by **Cuno Engineering Corp.**, Dept. 7073H, 80 S. Vine St., Meriden, Conn.

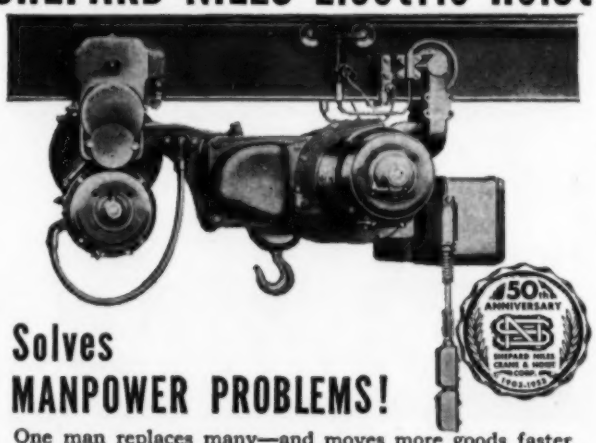
For more details circle NED-348 K3 on enclosed inquiry slip

Sheet Metal Fabricator

Wales-Strippit Corp.—Punching, notching and nibbling can be performed at up to 165 strokes per minute by Wales sheet metal fabricator described and illustrated in catalog 10-AA. Machine features rapid interchangeability and setup. This 1¼-in. Quick-Change holder permits changing of punches and dies for various round and shaped holes up to 1¼ in. in a few seconds. The 3½-in. holder punches round and shaped holes from 1 5/16 to 3½ in.

For more details circle NED-349 K3 on enclosed inquiry slip

SHEPARD NILES Electric Hoist



Solves MANPOWER PROBLEMS!

One man replaces many—and moves more goods faster—with a Shepard Niles Electric Hoist! These rugged hoists free floor space for production, put waste ceiling area to work—enable an older man, woman or youth to handle heaviest loads with ease.

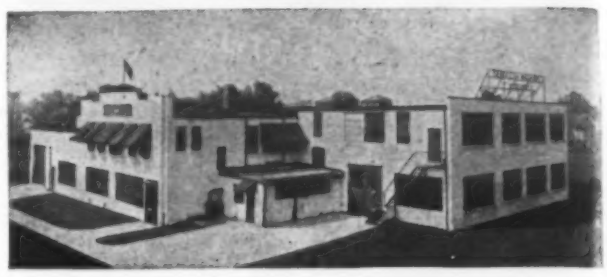
Learn how a Shepard Niles Hoist—in light, medium or heavy capacity—fits into your production picture. Let a Shepard Niles representative help you select the right capacity and controls for your handling job. Write today for latest bulletins—and ask to have a representative call

HOISTS Operated from Cab, Floor or Pulpit. Cap: 1 to 20 Tons.
CRANES Overhead: Top Running, Inner Running, Under Running, Floor or Cab Operated. Cap: 1 to 450 Tons.

SHEPARD NILES
CRANE AND HOIST CORPORATION
1828 SCHUYLER AVENUE, MONTOUR FALLS, N.Y.

For more details circle NED-350 K3 on enclosed inquiry slip

THIS PLANT



Provides **TOOLING** and builds **SPECIAL MACHINES**

Thirty-four years of special machine and tool building has trained SEMCO tool-makers, engineers and skilled workmen—well able to most efficiently design, develop and build your new machinery and production equipment.

Write for a copy of our *Free Pamphlet—"Men, Machines and Equipment"*. It gives a practical answer to your tooling, special machine development and experimental problems.

SEMCO
SERVICE MACHINE COMPANY
INCORPORATED
202 MILLER STREET ELIZABETH, N. J.

For more details circle NED-351 K3 on enclosed inquiry slip

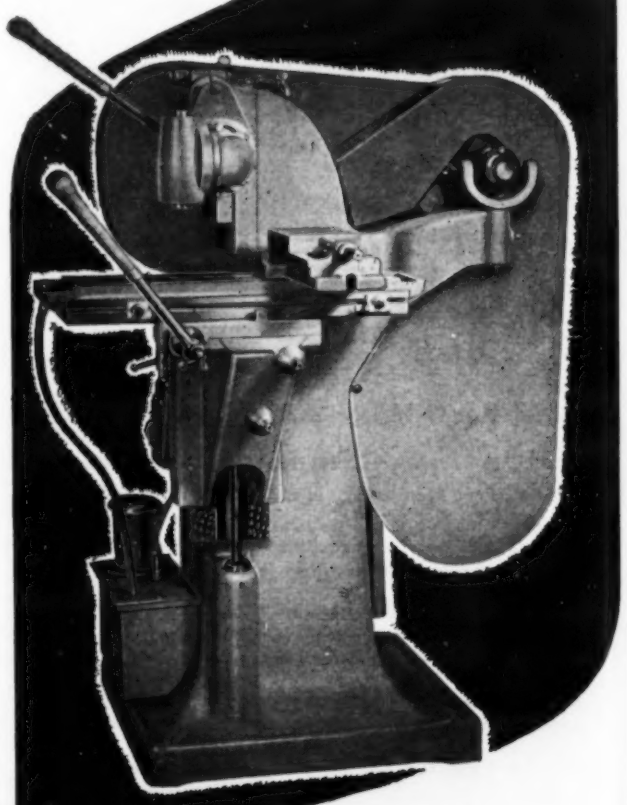
Cut Costs

on Tool Room, Development and Mass Production Milling with

U.S. No. 1

HORIZONTAL MILLING MACHINES

Time-proved, shop-proved, profit-proved "U. S. No. 1" heavy duty, hand-feed milling machines are outstandingly America's No. 1 Machine Tool value. Easily adapted to production with automatic devices.



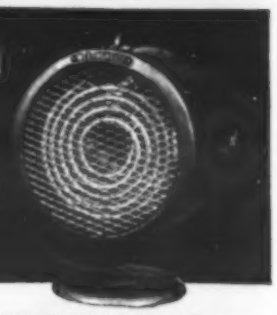
SEND FOR DATA AND SUGGESTIONS

Suggestions as to how a U. S. No. 1 Milling Machine can cut costs on your particular production needs, as well as complete data on the basic machine and attachments, gladly furnished on request.

THE **U. S.-BURKE** MACHINE TOOL DIV.
Bretherton Road 2,
Cincinnati 27, Ohio

For more details circle NED-352 K3 on enclosed inquiry slip

MORE HEAT with LESS SPACE use Westinghouse Air Heaters



Westinghouse COROX® and SPEEDTEMP forced convection air heaters are especially designed for space or area heating. They provide positive air circulation to maintain a comfortable room temperature without cold spots. For out-of-the-way, hard-to-heat places, here is the fast, efficient way to provide low-cost heat. Investigate these versatile heaters today.

FREE 26-Page Catalog—Tells you how to select the proper heater that will best fill your needs. Excellent information on heating insulated and non-insulated rooms. A definite help in your heater selection. Mark inquiry card for Catalog 28-020, or write Westinghouse Electric Corp., Industrial Heating Dept., Meadville, Penna. J-10414

YOU CAN BE SURE...IF IT'S Westinghouse

APPARATUS DISTRIBUTOR WESTINGHOUSE

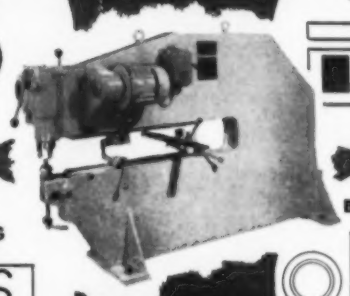
▲ For more details circle NED-353 K3 on enclosed inquiry slip ▲

PULLMAX Does all These Operations

SAVE TIME, LABOR & EXPENSIVE DIES

CIRCLE CUTTING

STRAIGHT CUTTING



SLOT CUTTING

BEADING

CHOICE OF 9 SIZES TO FIT YOUR REQUIREMENTS

FOLDING

From 16 ga. up to 11/32" capacity.

LOUVERS

MODERNIZE YOUR SHOP WITH PULLMAX

WRITE FOR LITERATURE AND PRICES

BACKED BY NATIONAL SALES AND SERVICE

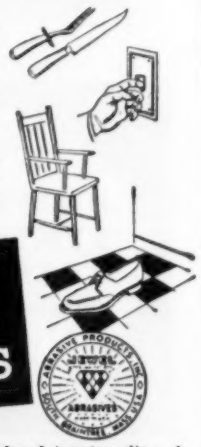
AMERICAN PULLMAX COMPANY, INC.
2457 NORTH SHEFFIELD AVENUE · CHICAGO 14, ILLINOIS

▲ For more details circle NED-354 K3 on enclosed inquiry slip ▲

How to get FINER FINISHING at a lower cost

Start by specifying Jewel Brand Coated Abrasives.

Whatever your finishing operation may involve — grinding, smoothing or polishing — there's a specific Jewel Brand Abrasive Belt designed and made to help you do the job better, faster, and at a lower cost. Let an experienced Jewel Brand Engineer help you select the *right* one — for metal, wood, leather, rubber or plastic. Write for complete details. Abrasive Products, Inc., 525 Pearl St., South Braintree 85, Mass.



Jewel Brand COATED Abrasives

▲ For more details circle NED-355 K3 on enclosed inquiry slip ▲

TELEPHONE MICROPHONE eliminates unwanted noises

Physically interchangeable with the mouthpiece and transmitter of most telephones, Confidencer microphone cancels out unwanted background noises by directing them through sound chambers to both sides of the diaphragm. Energy produced by the unwanted noise is thus cancelled out as pressure on one side of the diaphragm counteracts that on the other. When talking directly into the microphone, however, desired signal is transmitted in a normal manner. Noise interference is reduced as much as 20 decibels. Approved by the Bell System, unit is made by **Roanwell Corp.**, Dept. C-1, 662 Pacific St., Brooklyn 17, N. Y.

▲ For more details circle NED-356 K3 on enclosed inquiry slip ▲

DUST COLLECTOR features S-shaped water curtain

Most types of processing dusts can be separated from the air by this design 4, type N Roto-Clone dust collector which features an S-shaped water curtain. Three basic arrangements, identical in operating principle, but differing in hopper design and means of sludge removal, provide manual cleanout, continuous drain or sludge ejection by flight conveyors. Improved features include nonplugging water entrainment separators, heavier, sludge ejector mechanism and sectional construction to allow field conversion from one arrangement to another. Sizes available are for capacities from 1000 to 48,000 cfm. Made by **American Air Filter Co.**, 391 Central Ave., Louisville 8, Ky.

▲ For more details circle NED-357 K3 on enclosed inquiry slip ▲

Tongs & C-Hooks

Heppenstall Co.—Methods of handling materials with Heppenstall tongs and C-hooks are pictured and briefly described in 24-page brochure. They are shown lifting bales, barrels, racks, bars, slabs, die blocks, locomotive wheel tires, coils and other products. Some tongs tilt an object from horizontal to vertical or vice versa as they lift.

▲ For more details circle NED-358 K3 on enclosed inquiry slip ▲

Dependable POWER

Sarkes Tarzian

"Centre-Kooled"®

PATENTS NO. 2618692 & 2620384

SELENIUM RECTIFIERS

Fourteen cell sizes . . . one million combinations.

What's yours? Write, wire or phone

Sarkes Tarzian, Inc., Rectifier Division, Dept. W3, 415 N. College Ave. Bloomington, Indiana

In Canada: 50 St. Clair Ave. W., Toronto

▲ For more details circle NED-359 K3 on enclosed inquiry slip ▲

YOU CAN DO IT FASTER with HANSEN ONE-HAND TACKER

Only ONE of 1001 Uses

TACKING wood reinforcement on airplane braces is but ONE of 1001 uses of HANSEN one-hand Tacker. Other uses include: fastening screens on TV sets, tacking radio and TV wires, refrigerator door gaskets, chair and auto-seat covers, insulation, etc.

(MODEL T-3-4 HANSEN TACKER)

Made in . . . 36 different models; for driving . . . 80 sizes of staples, the Hansen line offers you a model suited to your individual needs.

REQUEST BOOKLET TODAY

A.L.HANSEN MFG.CO.

5164 RAVENSWOOD AVE., CHICAGO 40, ILL.

▲ For more details circle NED-360 K3 on enclosed inquiry slip ▲

Now...a steam hose that CAN'T BURST

...it's NYB&P's "HY-TEST" hose

Hy-Test just *can't* burst and spray out live steam ...steam that can scald and even kill! Here's why. Hy-Test hose is reinforced with several rubber-encased plies of closely-woven *braided-steel wire* that prevent sudden failure.

After long and severe service, harmless seepage through these blowout-proof plies provides ample warning of the need for replacement.

Add to this safety feature a specially-compounded steam-resistant inner tube, a breaker ply of spiraled asbestos cord that keeps the outer surface cool, and an extra tough, abrasion-resistant cover and you have a super-service, super-safe hose for super-heated steam—Hy-Test steam hose! It's made to withstand working pressures up to 200 pounds.

Your local NYB&P Distributor can supply you with Hy-Test—and other superior quality steam hose for less severe service. Follow his advice for maximum hose value...with maximum safety!

NYB&P NEW YORK BELTING & PACKING CO. 1 Market St., Passaic, N. J.

America's Oldest Manufacturer of Industrial Rubber Products

▲ For more details circle NED-361 K3 on enclosed inquiry slip ▲

You Can Take the Word of 50,000 Firms

That SPEED SWEEP Floor Brushes Sweep Cleaner, Faster and Outlast Ordinary Brushes

Unique in design and construction, Speed Sweep so far outperforms and outlasts other floor brushes that over half of the nation's top rated firms use Speed Sweep under widely diversified sweeping conditions. We know Speed Sweep can do a better job for you, too. In fact, we guarantee it. We invite a trial order on that basis. Write for complete facts, including styles, sizes and prices today.

MILWAUKEE DUSTLESS BRUSH CO.
530 N. 22 STREET, MILWAUKEE 3, WISCONSIN

▲ For more details circle NED-362 K3 on enclosed inquiry slip ▲

STEAM HUMIDIFIERS may help you too They help the companies on this list...

THIS partial list of Armstrong Steam Humidifier users names over 700 companies in 18 basic industries. All are aware of the serious effects of dry air on their operations, and all eliminated dry air troubles by installing steam humidifiers. These installations have proven Armstrong Steam Humidifiers to be a dependable means of automatically increasing humidity by adding clean dry steam to the air.

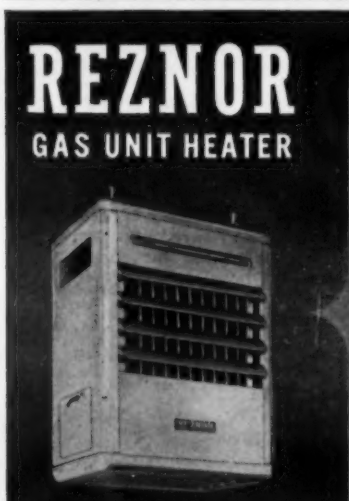
Why put up with costly dryness when a low cost solution is available. *Get complete details. Send for free* BULLETIN No. 1774 *and list of users.*

ARMSTRONG MACHINE WORKS
819 Maple Street • Three Rivers, Michigan

ARMSTRONG STEAM HUMIDIFIERS

▲ For more details circle NED-363 K3 on enclosed inquiry slip ▲

REZNOR GAS UNIT HEATER



the world's largest-selling GAS UNIT HEATER

Invites Your Consideration

★ Low First Cost
★ Low Noise Level
★ High Efficiency
★ High Value

See Sweet's Catalog Files or Mail the Coupon Today

REZNOR MANUFACTURING COMPANY
41 UNION ST. • MERCER, PENNA.

NAME_____
FIRM_____
ADDRESS_____
CITY_____ ZONE_____ STATE_____

I am an ☐ ARCHITECT ☐ BUILDER ☐ HEATING ENGINEER

▲ For more details circle NED-364 K3 on enclosed inquiry slip ▲

SAND BLAST GUN
also for liquid and air cleaning

Triple-purpose Carco hand gun is designed for cleaning small parts and surfaces with sand, liquid or air. It operates on air pressures of 75 psi and up, with maximum efficiency for sand blasting obtainable with pressures of 100 to 140 psi. Lightweight gun has a hardened steel jet and nozzle and is offered in a kit which comprises gun, three extra nozzles, an extra jet, glass sand container, machined brass fittings, 3-ft rubber hose and wrench for removing and installing the jet. Made by **C. A. Roesch & Co.**, Dept. NED-1, 1221 S. Hope St., Los Angeles 15, Calif.

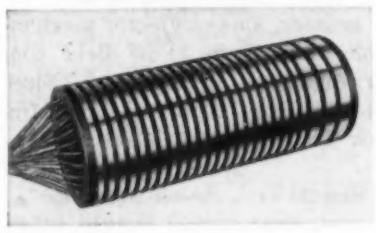
▲ For more details circle NED-365 K3 on enclosed inquiry slip ▲

INDUSTRIAL WHEELS
with 4.00 x 8 pneumatic tire

Equipped with high speed Timken bearing hubs, this line of industrial wheels features 4.00 x 8-in. pneumatic tires on demountable rims. Outside diameter of tire is 16 in. Wheel is designed for spindle or fork mounting, both being available with several bearing sizes and 3, 4 and 5-in. standard hub lengths. All have grease closures and weigh about 7 lb. Made by **Indus Corp.**, 1815 Madison Ave., Indianapolis 25, Ind.

▲ For more details circle NED-366 K3 on enclosed inquiry slip ▲

SLIP RING ASSEMBLY
equipped with 25 circuits



Combining a dimensionally stable plastic body and two end pieces with high impact strength to facilitate assembly on to a shaft, this 25-circuit slip ring assembly is designed for gyroscope test equipment. With brushes of proper design, unit provides an essentially noise-free circuit. Power circuits can be carried by the assembly by increasing ring width to allow for larger brushes (note wider end rings). Uniformly hard silver rings are electrodeposited into a precisely machined blank for concentricity and brush alignment. Made by **Electro Tec Corp.**, 55 Bergen Turnpike, South Hackensack 2, N. J.

▲ For more details circle NED-367 K3 on enclosed inquiry slip ▲

NEW SBS WATERLESS WASHSTATION*

"brings the washroom to the worker"*
for only $52.50 per unit
(F.O.B. Saginaw, Mich.
Towel Dispensers not included)

SBS Waterless Washstations are complete units for hand washing on the job. Because they dispense SBS-30 Waterless Skin Cleanser, these Washstations require no plumbing . . . SBS-30 is simply rubbed on the hands and wiped off along with all the soil.

SBS Waterless Washstations —

- **In Trouble Spots** — Avoids workers use of irritating, harmful solvents. Quickly and safely removes tars, greases, paints, varnishes and other hard-to-remove soils.
- **On the Production Line** — Cuts to a minimum costly interruptions for hand washing.
- **Actually Earn You Money** — By eliminating one unnecessary trip per day for hand washing by only 10 men, you can save up to $720 annually.

Fill out and mail the coupon below for complete information about SBS Waterless Washstations and our 30-day no-risk money back trial offer.

*Trademark 92-A

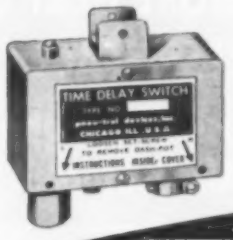
SUGAR BEET PRODUCTS CO., Dept. 7F, SAGINAW, MICHIGAN
Sirs: Please send me full information about the new SBS Waterless Washstation and your 30 day no-risk money back trial offer.
NAME_____
TITLE_____
COMPANY_____
CITY_____ ZONE_____ STATE_____

SUGAR BEET PRODUCTS CO. • Saginaw, Mich.
Chemical By-Products Division

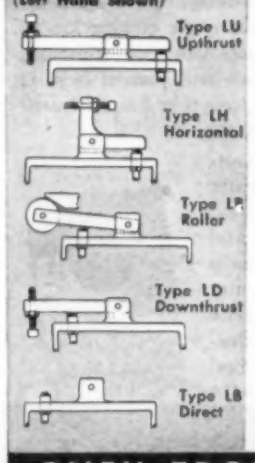
▲ For more details circle NED-368 K3 on enclosed inquiry slip ▲

NEW CYLINDER TIME DELAY CONTROL SWITCH

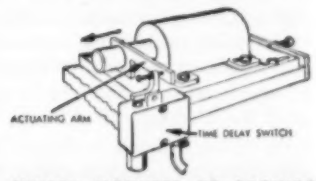
INCREASES APPLICATION . . . WIDENS USE OF CYLINDER POWER



For Any Type Actuation Left or Right Hand (Left Hand Shown)



Pneu-Trol Time Delay Switches provide independent hydraulically controlled adjustable time dwell between ¼ and 60 seconds in 20 to 1 ratios. Readily mounted on machine for cylinder dwell at a positive stop. Compactly designed—a simplified low cost answer to electrical time dwell control of any air or hydraulically operated machine movement such as press work, burnishing, coating, quenching, metal-cutting, etc. Ideal for automatic feeders. Dimensions: 4⅛" wide; 2⅜" high; 1-7/16" deep. Overall height 4⅛".



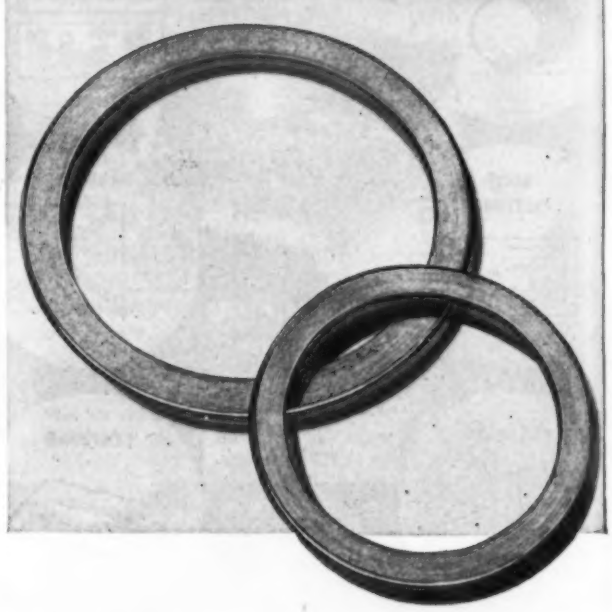
SWITCH MOUNTED TO PROVIDE DWELL AT END OF POWER STROKE

Write for descriptive literature and complete details.

PNEU-TROL DEVICES, INC.
1432 N. Keating Ave. Chicago 51, Illinois

▲ For more details circle NED-369 K3 on enclosed inquiry slip ▲

SPIRALWOUND



World's most popular type metal-asbestos gasket

• Spirally wound Type Gaskets deserve their popularity because they offer a built-in resiliency, for safe seals with lighter boltloads, that no other gasket type offers.

Ajax Spiralwound Gaskets are made for all standard pipe flanges and for manholes, handholes and tube caps of all makes of stationary and marine boilers, waterwalls, economizers, and other boiler accessories.

They are available in plated low-carbon steel or stainless with fillers of Canadian or blue African Asbestos or chemically inert duPont Teflon.

Ask your Industrial Distributor or write—

UNITED STATES GASKET COMPANY

FABRICATORS OF "TEFLON" & "KEL-F" FOR THE CHEMICAL PROCESS & ELECTRONIC INDUSTRIES
CAMDEN 1 NEW JERSEY

Representatives in Principal Cities Throughout the World

▲ For more details circle NED-370 K3 on enclosed inquiry slip ▲

AIR CYLINDER POWER UNIT

offers a choice of SIX BUILT-IN VALVES

Now, the Bellows Air Motor — the only air cylinder with an integral valve — offers a choice of six built-in valves:

1. Finger-touch manual control valve.
2. Low voltage electrical control — standard or explosion-proof.
3. 110 volt maintained contact electrical control.
4. Maintained pressure air pilot valve control.
5. Momentary exhaust air poppet valve control.
6. Continuous cycling control.

Here is a range of air cylinders with integral valving that offers the engineer every latitude in pneumatic design.

Completely described in Bulletin CL-50 FREE on Request. *Write for it today, Dept. NED 1053.* 821A

The Bellows Co.
AKRON 9, OHIO

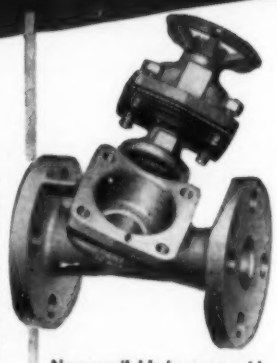
For more details circle NED-371 K3 on enclosed inquiry slip

SAFE CONTROL for hard-to-handle fluids

CRANE PACKLESS DIAPHRAGM VALVES

Advanced design, plus Crane Quality throughout, makes Crane Packless Diaphragm Valves your safest buy for hard-to-handle fluids. The diaphragm serves one function only —sealing the bonnet. The seating member is a separate unit. That's how Crane provides positive shut-off, even in case of diaphragm failure. Crane design also gives you longer diaphragm life . . . easy operation . . . simplified maintenance at lowest upkeep cost.

Check your Crane No. 53 Catalog, or ask your Crane Representative.



Now available in a new wide choice of body, disc insert and diaphragm materials—in unlined or lined patterns. Working pressures—up to 150 pounds, water, air, oil, or gas, 180° F. maximum temperature depending on valve size, material, and service.

CRANE VALVES

CRANE CO., *General Offices:* 836 S. Michigan Ave., Chicago 5, Illinois
Branches and Wholesalers Serving All Industrial Areas

VALVES • FITTINGS • PIPE • PLUMBING • HEATING

For more details circle NED-372 K3 on enclosed inquiry slip

USE THIS NEW SAFETY MATERIAL ALL OVER YOUR PLANT

Work platforms

Flooring

Catwalks

Partitions

Safety GRIP-STRUT Pat. Pending

NON-SKID—RUGGED—LOW COST

Safety Grip-Strut is a new basic material. All one piece, steel or aluminum, in various sizes and gauges. Sold like lumber, used like lumber and stocked in your storeroom like lumber. Ideal for on-the-job fabricating. Not welded, riveted or expanded. It presents an open space, in a diamond shaped pattern, in excess of 75% of the area for ready access of light and air and gives a positive NON-SKID footing in all directions. Ideal for stair treads, fire escapes, cable trays, work platforms, catwalks, flooring and for original equipment safety treads. Your own mechanics can install it—it's inexpensive, yet permanent and safe.

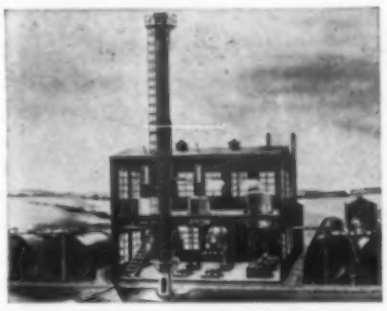
Write today for new catalog showing loadings and methods of easy application in your plant.

Distributors in all principal cities.

GRIP-STRUT division
THE GLOBE COMPANY
Manufacturers since 1914
4002 S. Princeton Ave. • Chicago 9, Ill.

For more details circle NED-373 K3 on enclosed inquiry slip

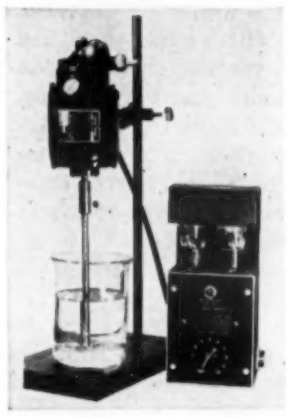
FAT-SPLITTING PLANT has capacity of 500 lb per hour



This package-type plant is designed to make continuous fat splitting practicable for the smaller processor, and has a rated capacity of 500 lb per hour. It gives up to 98 per cent yields of products including fatty acids and glycerin, using the Colgate-Emery process. This process is a recent development, making possible the elimination of the catalyst usually employed to speed hydrolysis and gives a continuous reaction. It also gives high yields of quality fatty acids and increases the concentration of the glycerin. End products from the plant are used in making a vast array of products including soaps, lubricants, rubber, cosmetics and nitroglycerin. Made by **Blaw-Knox Co.,** Dept. NED, Farmers Bank Bldg., Pittsburgh 22, Pa.

For more details circle NED-374 K3 on enclosed inquiry slip

LABORATORY MIXER electronically controlled, has reversible speed at full torque



Advantages of controlled speed in direct current motors operating from alternating current outlets is provided by this GT-21 laboratory mixer. Direct current motor is enclosed ball bearing unit with extended armature and gear shaft, both ends of which are usable either with chuck, mixing shafts or three-step pulley. Motor torque is constant over entire speed range. Armature shaft with speed from 0 to 5000 rpm can be run in either direction by means of reversing switch on controller. Supplying more current than actually needed to run motor, controller's two No. 2050 thyratron tubes provided power conversion in stepless variation to supply motor armature power.

Attachments include mounting bracket; two shafts —one with 1½-in. propeller and one with special heavy paste paddle; 0 to ⅜-in. capacity three-jaw chuck with mounting arbor; three-step pulley to fit either shaft; and hollow head wrenches for set screws in various attachments. Mixer operates on 120-v single phase ac, 50-60 cycle. Made by **Gerald K. Heller Co.,** Ridgeley & Worcester Sts., Baltimore 30, Md.

For more details circle NED-375 K3 on enclosed inquiry slip

All-Electric ADJUSTABLE SPEED

with the 3/4 to 3 hp. RELIANCE V★S DRIVE Jr. STYLE E

Saves You Money 10 Ways!

- Boosts output
- Reduces operator fatigue
- Cuts changeover time
- Simplifies machine design
- Handles more jobs
- Cuts down rejects
- Reduces "down time"
- Increases safety
- Saves space
- Operates from a-c.

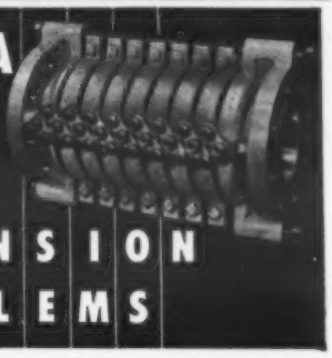
WRITE FOR BULLETIN D-2102

RELIANCE ELECTRIC AND ENGINEERING CO.
1082 IVANHOE ROAD • CLEVELAND 10, OHIO

Sales Offices in Principal Cities

For more details circle NED-376 K3 on enclosed inquiry slip

ZALLEA for your EXPANSION PROBLEMS



This Zallea Duo-Equalizing Stainless Steel Expansion Joint is an ideal medium for absorbing expansion and contraction in pipelines due to thermal changes.

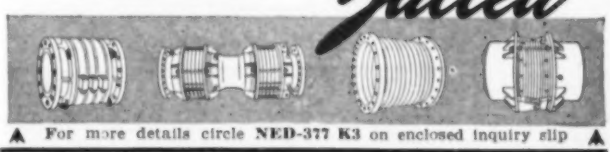
These Zallea products find application in intermittent steam service in long lines for both institutions and industrial plants.

Other Zallea joints are available in either single or double flanged or welded end types in diameters up to thirty feet. Temperatures may vary from sub-zero to 1600° F. and pressures from vacuum to 2000 psi. For further information, write today for bulletin No. 351.

There's no obligation, of course.

Zallea Brothers, 818 Locust Street, Wilmington 99, Delaware.

Zallea



For more details circle NED-377 K3 on enclosed inquiry slip

How a 'Sexauer' Easy-Tite faucet washer costing pennies can save you $115.22 a year!

A tiny, 1/32" faucet leak wastes 95,040 gallons—*$24.14* worth*—of water yearly.

Hot water leakage is even costlier . . . Fuel waste adds upward to *$91.08*** more to the loss. Total down the drain: *$115.22.*

And this is the dollar loss caused by only *one* pinpoint leak!

Fuel Waste		Water Waste	Total Waste
Oil (792 gals.)	**$91.08	$24.14	$115.22
Coal (9,879 lbs.)	88.91	24.14	113.05
Gas (84,411 cu. ft.)	84.81	24.14	108.95

*Water costs (figured at $1.90 for 1,000 cu. ft.) authenticated by Hackensack Water Co. **Fuel costs authenticated by American Gas Association.

Save money; cut costs; stop leaks with dependable 'Sexauer' Easy-Tite faucet washers.

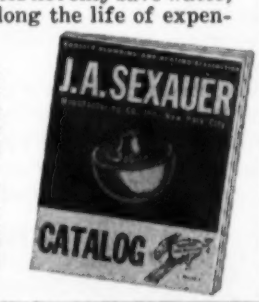
Built like a tire with fibreglas reinforcement

Easy-Tite faucet washers are made of a special du Pont product, instead of rubber, and reinforced with fibreglas. The result is a washer that resists the closing squeeze that splits and mushes ordinary washers. And Easy-Tites withstand destructive heat (up to 300° F. by test). These features explain why *'Sexauer' Easy-Tites outwear ordinary faucet washers 6 to 1!*

By avoiding labor on those 5 additional repairs, Easy-Tites cut today's high maintenance costs 83⅓%! But Easy-Tites not only save water, fuel, labor; they also prolong the life of expensive fixtures.

FREE CATALOG—Easy-Tite faucet washers are just part of the line of over 3000 'Sexauer' Triple-Wear plumbing repairs parts and patented precision tools.

Get complete information on Easy-Tites and other cost-cutting 'Sexauer' materials. Send for our FREE, new 118 page Catalog G. Fill in and mail the coupon today.



J. A. Sexauer Mfg. Co., Inc. Dept. AU-103
2503-05 Third Ave., New York 51, N. Y.

Gentlemen: *Please send me a copy of your FREE, new 118 page Catalog G.*

My name.....Title.....

Company or Institution.....

City.....Zone.....State.....

SEXAUER
WORLD'S LEADING SPECIALISTS IN PLUMBING AND HEATING REPAIR PARTS

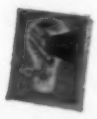
For more details circle NED-378 K3 on enclosed inquiry slip

The glass of a *Champion*

A glass bubble, blown around a filament for a man named Edison at a place named Corning, led to mass production of incandescent bulbs about the time Champion Lamp Works was founded — in 1900.

Today's "ribbon" machine turns out a million bulbs a day to glass wall thickness tolerances of no more than .0075".

Glass for Champion Lamps must be strong and resistant to the attack of water, chemicals, fumes, grit, wind and flame. It must keep Champion Lamps ready to perform like Champions.



Write for new booklet S, CHAMPION QUALITY, containing much interesting, illustrated information.

CHAMPION LAMP WORKS
Lynn, Massachusetts
A DIVISION OF CONSOLIDATED ELECTRIC LAMP CO.

For more details circle **NED-380 K3** on enclosed inquiry slip

Better rubber products are made with Du Pont NEOPRENE

Neoprene flexible ducts boost production 10% in buffing operation . . . still on job after 2½ years

A large manufacturer of automobile accessories ran into trouble on his buffing and polishing line operation. Rust and dirt caused metal exhaust ducts, integral with the buffing wheels, to stiffen within six months, and positioning of the wheels became a major, time-consuming operation. The problem called for a new type of duct, and Du Pont neoprene supplied the answer.

By installing flexible neoprene-coated fabric ducts, this firm cut adjustment time from hours to minutes . . . increased production 10% in the buffing department, and cut consumption of buffing wheels by 15%. Moreover, despite constant exposure to abrasive grit, grease and buffing oils, the neoprene ducts are still in good condition after *2½ years of service.*

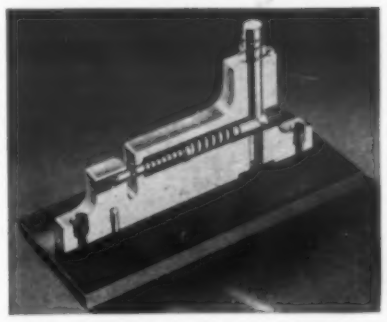
This service record is a typical example of how many neoprene products reduce maintenance costs and improve production. While Du Pont makes no finished goods of neoprene, your manufacturer or distributor will be glad to tell you about the neoprene products he supplies.

FREE! THE NEOPRENE NOTEBOOK
Each issue describes new neoprene products . . . improved old products . . . tips on reducing maintenance costs. Write today for your free subscription. E. I. du Pont de Nemours & Co. (Inc.), Rubber Chemicals Div. NE-10, Wilmington 98, Delaware.

NEOPRENE
The rubber made by Du Pont since 1932
DU PONT
BETTER THINGS FOR BETTER LIVING . . . *through Chemistry*

For more details circle **NED-381 K3** on enclosed inquiry slip

HORIZONTAL HOLE PUNCHES for shaped and formed work



Type H horizontal hole punching units are designed to punch holes in curved and straight flanges, rims and angles, and similar shaped and formed work. Because punches move back and forth, it is possible to produce holes in side of work. Self-contained units can be used on press brake rails and on templates in stamping presses. Practically any desired pattern or setup can be made. Punches and dies are removable for resharpening. Range is up to ½-in. holes in mild steel up to ⅛-in. thick. Made by **Wales-Strippit Corp.,** 363 Payne Ave., North Tonawanda, N. Y.

For more details circle **NED-382 K3** on enclosed inquiry slip

INDUSTRIAL ROD PACKINGS perform in —90 to 500° F range

Industrial rod packings of braided asbestos, using an impregnation of 35 per cent Teflon are now available. Packings will perform satisfactorily in all temperatures ranging from −90 to 500° F. Two types of asbestos with tetrafluoroethylene are being supplied. A white asbestos impregnated with resin is designed for dilute acids, caustics and various chemicals on centrifugal or reciprocating pumps and valve stems. A blue asbestos is recommended for use on similar installations where acids and chemicals of higher concentration are handled. Made by **United States Rubber Co.,** 1207 Rockefeller Center, New York 20, N. Y.

For more details circle **NED-383 K3** on enclosed inquiry slip

TIPPING MACHINE now has conveyor delivery

Conveyor delivery now incorporated in this Sulby tipping machine not only increases output, but facilitates handling of small signatures or book printing forms and end sheets. Finished work is carried on slow speed belt from which it is removed by operator. A special size tipper is also available to handle signatures up to 30 in. long and is practical for blank book work and other books running beyond normal range of sizes. Made by **Hambro Trading Co. of America,** Hambro Machinery Div., Dept. NED, 17 E. 54th St., New York 22, N. Y.

For more details circle **NED-384 K3** on enclosed inquiry slip

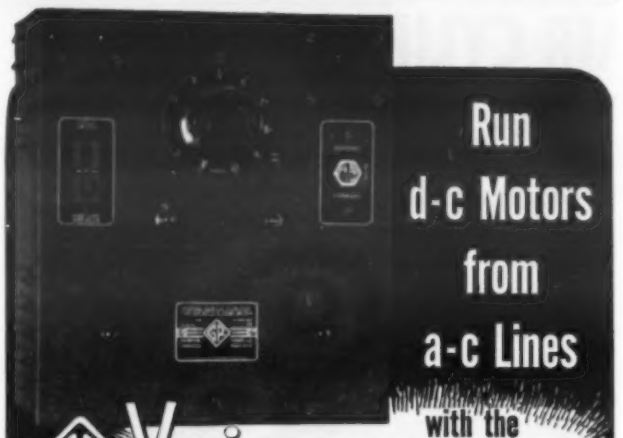
Try Them Free!
KEPS®
TESTING SAMPLES

See how this amazing new Shakeproof fastening saves assembly time and assures vibration protection. A SHAKEPROOF® Lock Washer of the right size and type is pre-assembled on each nut . . . only one unit to handle . . . the lock washer can't drop off . . . every nut is certain to be locked tight.

SEND FOR YOUR FREE KIT OF KEPS TESTING SAMPLES TODAY!

SHAKEPROOF®
"Fastening Headquarters"
Division of Illinois Tool Works
St. Charles Road, Elgin, Illinois

For more details circle **NED-385 K3** on enclosed inquiry slip



Run d-c Motors from a-c Lines with the GR Variac Motor Speed Control

4 MODELS
1/15th hp or less to 3/4 hp
COMPLETE Speed Variation from Zero to 15% Above Rated
Extremely FAST Start - Stop - Reverse
High Starting Torque
No Vacuum Tubes No Warm-up Required
Perfectly Smooth Control Even at Lowest Speeds
Small Enough to be Mounted Right at Machine
Very Simple to Install—Easy to Maintain
Prices from $75

Write for the G-R Motor Control Bulletin

GENERAL RADIO Company 275 Massachusetts Ave. Cambridge 39, Mass.
90 West St. NEW YORK 6 *920 South Michigan Ave.* CHICAGO 5
1000 North Seward St. LOS ANGELES 38

For more details circle **NED-386 K3** on enclosed inquiry slip

Keep your plant cleaner with

INVINCIBLE VACUUM CLEANERS

Invincible Light, Portable—1½ H. P.

These Invincible features insure outstanding performance: 1. Multi-stage turbines produce plenty of power. 2. Positive Separation precedes vacuum producer. 3. Reach *every* surface with attachment tools. 4. Also recover scores of industrial materials. 5. Compact, portable; no interference with production. 6. 15 models from ½ to 5 H.P. 7. Larger models can be operated continuously. 8. No dirt or abrasives ever touch moving parts . . . *Over 100,000 Invincibles in use—5,000 for over 25 years. Send for free bulletin.*

INVINCIBLE VACUUM CLEANER MFG. CO.
DOVER, OHIO

For more details circle **NED-387 K3** on enclosed inquiry slip

NEW THE WELLS MODEL 800 HEAVY-DUTY CUT-OFF SAW

. . . the first metal cut-off Saw designed for use with High Speed Steel Band Saw Blades

THE NEW WELLS MODEL 800, engineered to use blades 1" in width, is a heavy duty, metal cutting band saw designed to bring new accuracy and efficiency to your production cut-off operations.

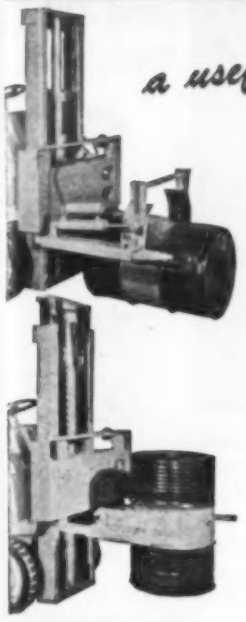
Model 800 is also the first metal cutting band saw approved for use with high speed steel band saw blades. When used with this type of blade, a higher level of cutting efficiency has been attained in cutting stainless steel, die blocks and other tough metals.

See your Wells dealer for further information or write direct

Wells
Products by Wells are Practical
METAL CUTTING BAND SAWS
WELLS MANUFACTURING CORPORATION
1313 HARDING ST., THREE RIVERS, MICHIGAN

For more details circle **NED-388 K3** on enclosed inquiry slip

NEW! BAKER HYDRAULIC DRUM UP-ENDER



a useful attachment for

BAKER FORK TRUCKS

With this attachment a fork truck can pick up and transport drums or other cylindrical objects either vertically or horizontally and rotate them 90°, for horizontal or vertical stacking. It can also tilt them forward 45° beyond horizontal for emptying at any height within the truck's lifting range. All operations are controlled by the operator from the driver's position. Attachment is quickly demounted by removing two lock pins, disconnecting a "snap-on" hose coupling and sliding the complete assembly off the forks.

For application on Baker 2000, 3000 and 4000 pound capacity fork trucks.

write for Bulletin 1350-4.

Baker industrial trucks

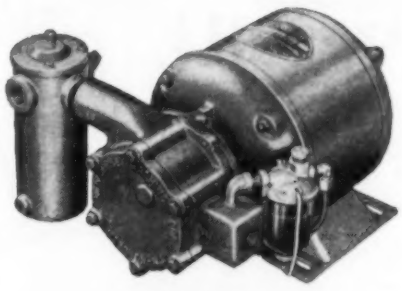
THE BAKER-RAULANG COMPANY
1245 W. 80th STREET • CLEVELAND 2, OHIO

BAKER-LULL Corp., *Subsidiary*, Minneapolis, Minn.
Material Handling and Construction Equipment

For more details circle NED-389 K3 on enclosed inquiry slip

USE THIS COMPACT MOTOAIR PUMP FOR VACUUM

AVAILABLE IN SEVERAL SIZES



NO BELTS • NO COUPLING • DIRECT DRIVE makes it MORE COMPACT!

No other pump packs such dependable vacuum in so compact a space. It's complete with motor. Plug in and use. Visible, circulating lubrication.

Write for Catalog—

823

NEW JERSEY MACHINE Corporation

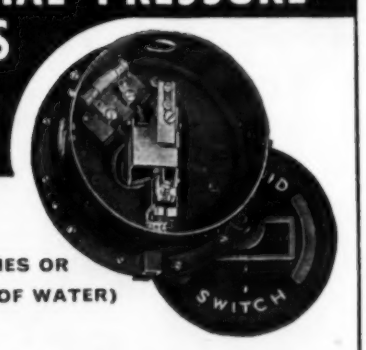
FACTORY SALES AND SERVICE BRANCHES
CHICAGO CINCINNATI LOS ANGELES

1550 WILLOW AVENUE, HOBOKEN, N. J.

For more details circle NED-390 K3 on enclosed inquiry slip

DIFFERENTIAL PRESSURE CONTROLS FOR LOW PRESSURES

MERCURY SWITCH EQUIPPED



FOR AIR OR GAS (INCHES OR FRACTION OF INCHES OF WATER)

TO OPEN OR CLOSE AN ELECTRICAL CIRCUIT ACCORDING TO A MINUTE CHANGE IN THE DIFFERENCE BETWEEN TWO PRESSURES OR VACUUMS

Mercoid Type PPQ Diaphragm Differential Pressure Controls operate from minute changes (.03" water) in the difference between two pressures.

Ranges to cover most applications (inches of water) 6" vacuum to 6" pressure, and 30" vacuum to 30" pressure. Available for various circuit arrangements.

Electrical Capacity—0.3Amp. at 115V., A.C. or 0.15 Amp., at 230V., D.C. Can be furnished in explosion-proof or weather-proof cases.

WRITE FOR BULLETIN CA-3P

THE MERCOID CORPORATION
4201 BELMONT AVE., CHICAGO 41, ILLINOIS, U.S.A.

For more details circle NED-391 K3 on enclosed inquiry slip

DURAL KNOBS
hand machined and hand engraved

Accurately machined from dural, line of hand-machined solid knobs for electronic and industrial equipment can be engraved with any inscription with any recessed color combination. Faces of knobs have a circular satin machine finish, and the sides are fluted. Screw type mounting is provided for round or flat standard ¼-in. shafts, and knobs have back recessed to clear bushing nuts and similar panel fittings. Diameters of 1, 1¼, 1½, 2 and 2½ in. are available. Made by **Pacific Transducer Corp.**, 11921 P. Pico Blvd., Los Angeles 64, Calif.

For more details circle NED-392 K3 on enclosed inquiry slip

SHUTOFF VALVE
for use in gas or oil lines

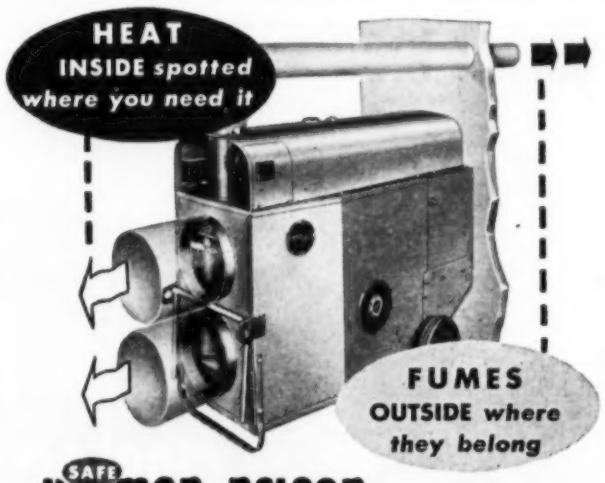
Solenoid operated, series 22 safety shutoff valve is of the globe type and is intended primarily for service in gas and oil lines. It is available in all standard pipe sizes from ¾ through 6-in., with threaded connections up to the 2-in. size and optional threaded or flanged connections thereafter. It is compact, and can be mounted in either horizontal or vertical lines. A chain and reset wheel are available for out-of-reach overhead installations. Mechanism will withstand ambient temperatures as high as 167° F, and oil heated to 250° F can be passed through the valve itself. Made by **North American Mfg. Co.**, 4453 E. 71st St., Cleveland 5, O.

For more details circle NED-393 K3 on enclosed inquiry slip

Winches & Pullers

Stephens-Adamson Mfg. Co. — Hand and motor winches and car pullers are described in illustrated bulletins 853 and 753, respectively. Motor operated winches range from 1 to 5 hp and can be wall or floor mounted, while hand winches are wall mounted and give between 500 and 2000 lb pull at the drum. Complete specifications are given for both these units and the car pullers, which are of drum and capstan types and give starting pull's up to 10,000 lb. Various other related products are also briefly outlined.

For more details circle NED-394 K3 on enclosed inquiry slip



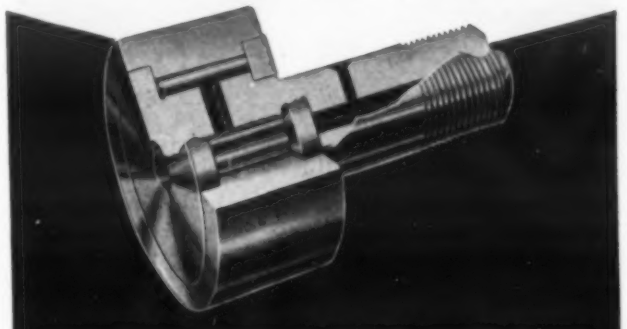
SAFE HERMAN NELSON PORTABLE AIR HEATERS

Here's safe temporary heat you can always trust! Herman Nelson Portable Air Heaters operate on the "sealed flame" principle. They are vented. They have automatic safety controls. There's no danger of fire, carbon monoxide, smoke or soot. Clean heated air *only* is directed to any spot you select—through flexible canvas ducts. Herman Nelson has the only complete line of completely safe Portable Air Heaters . . . oil or gasoline fired; electric or gasoline powered. Capacities from 125,000 to 450,000 BTU.

Get all the FACTS about ALL Portable Heaters. Write American Air Filter Company, Inc., Dept. 113, Moline, Illinois.

For more details circle NED-395 K3 on enclosed inquiry slip

Improve Performance of cam action with MULTIROL® Cam Follower Bearings



Multirol CF Series Bearings are designed especially to insure greater precision performance in any cam actioned bearing application. They are built to provide the ultimate in radial capacity, shock resistance, space economy and longer bearing life.

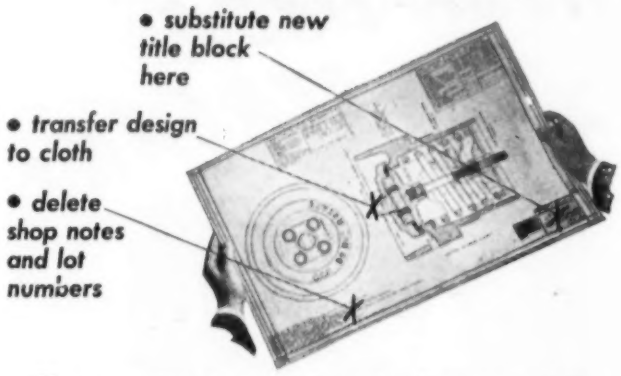
Send for McGill Catalog No. 52

McGILL® precision bearings

McGILL MANUFACTURING CO., INC. 101 N. LAFAYETTE ST. VALPARAISO, INDIANA

For more details circle NED-396 K3 on enclosed inquiry slip

All these changes made without one line of retracing



The American Car and Foundry Company, at its Milton, Pa., plant, has to modify hundreds of drawings like the one shown above to meet Army Transportation Corps requirements. Retracing would be much too slow...much too expensive. But how else can the job be done? *Kodagraph Autopositive Materials are the welcome answer!*

First—a positive photographic intermediate is made without a negative step by reproducing the original paper drawing on Kodagraph Autopositive Paper. A *fast room-light operation consisting of exposure in a standard print-making machine...and processing in standard photographic solutions.* The A.C.F. title block and shop notes are "scissored out" of this print ...only the essential design remains.

Next...the Autopositive cutout of the design area is positioned under a Kodagraph Autopositive Film print, which is a reusable master containing only the Army Transportation Corps title block. Then this composite is reproduced on a sheet of Kodagraph Autopositive Cloth—the same simple operation as was used previously for processing Kodagraph Autopositive Paper and Film.

Result: a sparkling, extra-durable reproduction comparable to an ink-on-cloth tracing. And the job done—not on the drafting board—but almost entirely in the print-making machine.

Write today for a free booklet giving complete details on the revolutionary line of Kodagraph Materials, which you, or your local blueprinter, can process conveniently, economically.

Kodagraph Reproduction Materials

"THE BIG NEW PLUS" in Engineering Drawing Reproduction

EASTMAN KODAK COMPANY
Industrial Photographic Division
Rochester 4, N. Y.

Kodak

For more details circle NED-397 K3 on enclosed inquiry slip

MINI-BRUSHES CLEAN HOLES

Too Small for any other method

Tiny holes in valve mechanisms, in electronics and electrical equipment, in hydraulic and pneumatic controls can be made clean, free from burrs, even burnished by Mill-Rose Mini-Brushes.

Mini-Brushes are specially made in decimal sizes to clean specific sized holes. Smallest practical size is .065". Fine materials and accuracy in manufacture are necessary to assure successful use. Length depends on the work to be done.

If cleaning tiny drilled, tapped or cored holes is your problem, we can assist you. Send print or sample part with letter outlining the result desired. Our research and know-how costs only your effort to contact us.

write today—Illustrated Bulletin on Request.

HIGH PRECISION INDUSTRIAL BRUSHES TWISTED IN WIRE

The MILL-ROSE Company 1985 EAST 59th STREET CLEVELAND 3, OHIO

▲ For more details circle NED-398 K3 on enclosed inquiry slip ▲

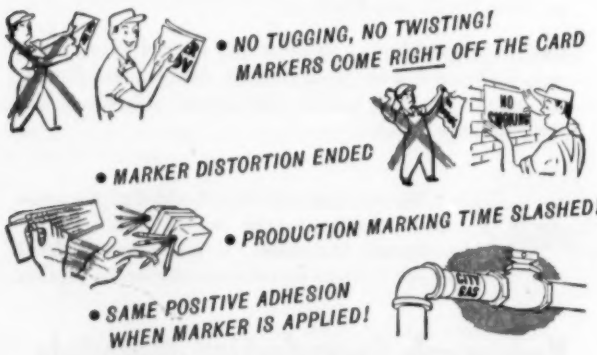
NOW— IT'S OFF LIKE A STREAK!

NEW TIME-SAVING **BLUE STREAK**© RELEASE COATING

Exclusively on BRADY ★ Wire Markers ★ Special Markers ★ Pipe Markers ★ Safety Signs ★ Quik-Masks ★ Container Markers ★ Fluid Line Markers ★ Write-On Labels ★ Stencils

These Brady Products were always good . . . New BLUE STREAK Release Coating makes them *great!* Now *standard* on all Brady Products, BLUE STREAK permits instantaneous and *practically effortless* removal of Brady Markers and Masks from Brady Dispenser Cards.

It ends distortion that USED to result from twisting and tugging when trying to pull Markers off old-style Cards. You will cut your marking costs because BLUE STREAK reduces application time as much as 90%!



See for yourself how BLUE STREAK will cut your marking; masking and labeling costs. Write today for FREE, useful literature and BLUE STREAK Demonstration Kit.

WIRE MARKERS · PIPE MARKERS · SAFETY SIGNS · AISLE MARKERS · MASKS & STENCILS · PRINTED ROLL TAPES

MANUFACTURERS OF SELF-STICKING PRODUCTS

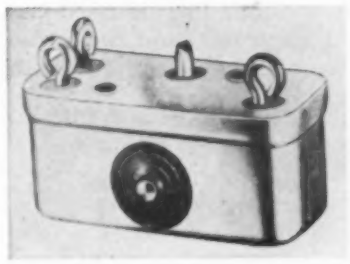
W. H. BRADY COMPANY

789 W. Glendale Ave • Milwaukee, Wisc.

No. 1 name and No. 1 source for Self-Sticking Industrial Products.

▲ For more details circle NED-399 K3 on enclosed inquiry slip ▲

SNAP-ACTION SWITCH is hermetically sealed



Small and lightweight, this precision snap-action hermetically sealed switch withstands changes in pressure and temperature, exposure to high acceleration, shock and vibration, and also exposure to dust, moisture and a number of other corrosive elements. It has rapid contact traverse rate with negligible bounce and high contact pressures at any actuation point. Switch blade is of beryllium copper with welded solid silver contacts. Ratings are 10 amp at 28 v dc and 110 v 60 to 400-cycle ac. The hermetic enclosure will withstand 100 psi internal pressure, and the switch is suitable for aircraft service up to 50,000 ft with a minimum life of 100,000 operations at rated load. Made by **Haydon Switch Co.,** Dept. N, 232 N. Elm St., Waterbury, Conn.

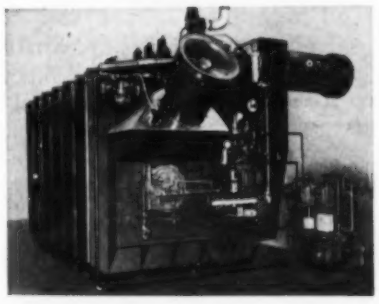
▲ For more details circle NED-400 K3 on enclosed inquiry slip ▲

SOAPSTONE HOLDER stone is adjustable to any length

Weighing only 3 oz, the See-Line soapstone holder eliminates loss from soapstone breakage and has an automatic locking device making the stone adjustable to any length for different marking conditions. It is also fitted with a convenient pocket clip. Price is $1.49 complete with soapstone. Made by **See-Line Co.,** Dept. ED, 618 Amarillo Bldg., Amarillo, Tex.

▲ For more details circle NED-401 K3 on enclosed inquiry slip ▲

PACKAGED BOILER is shop-assembled water tube type



Offered in ten standard sizes with capacities from 8000 to 30,000 lb of steam per hour, type H preassembled water tube steam generators are installed without special foundations. Complete unit package includes two drums, vertical bent tubes, refractory, steel casing, burner, controls, automatic safety detectors and soot blowers. Boiler is fired by oil or gas, has wide load range and handles load changes quickly and efficiently. Made by **Bigelow Co.,** New Haven 3, Conn.

▲ For more details circle NED-402 K3 on enclosed inquiry slip ▲

NEW! BIGGER SELECTION!

NOW . . .

30 different sizes and shapes up to 3" diameter in stock. Use these plastic cable clips for safe, light weight, durable support of wiring, tubing, components.

Write **WECKESSER COMPANY**

5251 N. Avondale Ave., Chicago 30, Ill.

▲ For more details circle NED-403 K3 on enclosed inquiry slip ▲

Chemical and Oil Resistant GASKETS

In sizes up to 36", moulded, extruded, clicked or hand cut . . . from special plastic or rubber formulations. High and low temperature applications. Our own mold shop facilitates fast mold production, means close supervision of mold design. Extensive chemical and compounding labs assure accurate formulations for your specific needs.

63C

COLONIAL RUBBER CO.

Oakwood St., Ravenna, Ohio

▲ For more details circle NED-404 K3 on enclosed inquiry slip ▲

Drill More Holes Per Hour In ANY Pattern . . . On ANY Drill Press

with a *Adjustable* **MULTI-DRILL**

DRILLS 2 to 8 HOLES at ONE STROKE

Increase production up to 800% . . . save time, cut costs. MULTI-DRILLS make *any* drill press produce *more*. Attached without alterations or special tools. Quick, easy setups of universally adjustable spindles give you more flexibility . . wider application. Handles any hole pattern within 9" circle; centers close as ½". Extension Spindles available to increase working area to 22½". Special adaptations available.

model 900

DRILLS ANY HOLE PATTERN

See us at Booth 835, Metal Show, Cleveland. Oct. 19-23.

COMMANDER MFG. CO.

4220 W. Kinzie St. • Chicago 24, Illinois

Product of *Commander* . . . Builder of Production Tools

▲ For more details circle NED-405 K3 on enclosed inquiry slip ▲

REMEMBER THE NAME . . . Rubyfluid

the easy-to-use Soldering Flux for neat, strong unions.

Use Rubyfluid Flux—liquid or paste—to get neat, strong unions speedily and easily. Rubyfluid is a special fast acting formula, wets out freely, is free from harmful and objectionable fumes, economical to use. Try it—send $1 for special offer—1 pt. liquid, ½ lb. paste flux and helpful booklet.

For Stainless Steel use *Ruby's Stainless Steel Flux,* perfected for that metal.

RUBY CHEMICAL CO.

72 S. McDowell Street Columbus 8, Ohio

Rubyfluid

▲ For more details circle NED-406 K3 on enclosed inquiry slip ▲

FOR COMPLETE PROTECTION

FROM THE WET • GREASE • OILS • ORDINARY ACIDS

TOWER'S FISH BRAND *NEOPRENE

These sturdy, durable, 100% DuPont **NEOPRENE** garments give that extra service to those who require protection from greases, oils, and most acids. There is a TOWER protective garment especially adaptable for every type of industrial activity. We will be glad to recommend the garment which best meets your individual requirements.

*A chemical rubber product of the DuPont Company

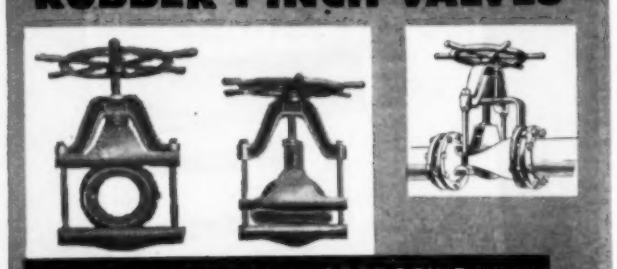
For folder of styles and detailed information write Department SF.

NEOPRENE RUBBER

TOWER'S FISH BRAND — A. J. TOWER CO. — 24 SIMMONS ST., BOSTON, MASS. — TOWER'S ARROW BRAND

For more details circle NED-407 K3 on enclosed inquiry slip

MASSCO-GRIGSBY RUBBER PINCH VALVES



FOR ABRASIVE AND CORROSIVE PULPS AND LIQUIDS

IT'S HINGED . . . for longer wear.

MOLDED RUBBER resists abrasion and corrosion . . . gives long life without maintenance.

UNOBSTRUCTED FLOW PASSAGE . . . eliminates high friction loss.

SIZES 1" to 12"

WRITE FOR BULLETIN

The Mine & Smelter Supply Co.

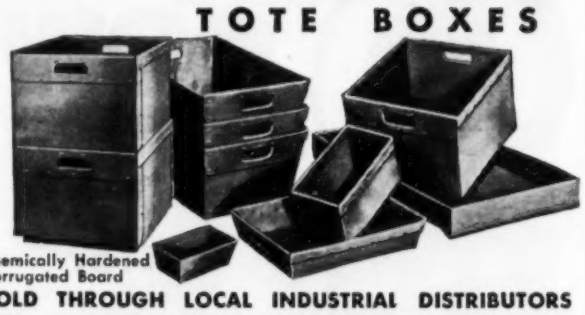
DENVER 17, COLORADO

Salt Lake City, El Paso, 1745 Broadway, N. Y. C.

REPRESENTATIVES IN FOREIGN COUNTRIES

For more details circle NED-408 K3 on enclosed inquiry slip

FAMOUS "CHEM-BOARD"* CONVOY TOTE BOXES



*Chemically Hardened Corrugated Board

SOLD THROUGH LOCAL INDUSTRIAL DISTRIBUTORS

Cost—weigh—50% to 60% less tnan steel. A wide range of sizes in standard and custom made NESTING, STACKING, VERTICAL TOTE BOXES. Write for complete information, prices, name of distributor in your area.

CONVOY RECORD STORAGE FILES

Sold Only by YOUR LOCAL STATIONER

Used by most famous names in industry and businesses of all kinds. CONVOY "CHEM-BOARD" files for record storage made in letter, legal, and 12 other sizes. Stack to ceiling, mate together. Call your local stationer or write for name of stationer nearest to serve you.

CONVOY, INC.

Canton 6, Ohio

P. O. Station B, Box 216-N

For more details circle NED-409 K3 on enclosed inquiry slip

6-IN. CLAMP has 5½-in. throat depth

The best features of standard drop forged C-clamp and toolmaker's parallel clamp are combined in this 6-in. clamp which has 5½-in. throat depth. Clamp incorporates Saxton principle which applies straight line force at point of clamping. Unit weighs 4 lb and is made from roll forged steel. By using torque-converting spring-bearing trunnion, distorting, twisting action is eliminated. Trunnion also absorbs vibration, insuring firm grip throughout milling, routing and shaping operations. Clamp will grip rounds, flats and nonparallel surfaces or a combination of these. Distributed by **Centinela Industrial Supply Co.,** 11934 Inglewood Ave., Hawthorne, Calif.

For more details circle NED-410 K3 on enclosed inquiry slip

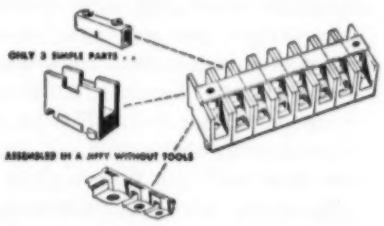
FLUSH RECEPTACLE is 10-amp two-wire T-polarity type

Featuring self-finding slots, double-wiping contacts and extra-large screws for ease of wiring, series 1040 flush receptacle is of the 10-amp two-wire T-polarity type. It is rated at 10 amp, 250 v and at 15 amp, 125 v, and is designed to accommodate standard single outlet plates. It is interchangeable with all other standard receptacles. Made by **Rodale Mfg. Co.,** Minor St., Emmaus, Pa.

For more details circle NED-411 K3 on enclosed inquiry slip

MOLDED TERMINAL BLOCKS assembled and combined as desired

Consisting of three simple parts which can be quickly assembled without tools, Lok-A-Blok terminal blocks can be assembled in lengths and combinations up to 25 poles without waste. Parts consist of solderless copper connectors, connector housings, and a strip tying housings and connectors together and also serving as identification marking. The top can be marked by pencil or ink, and moldings are colored bright red and yellow. On live metal parts the assemblies have a ¾-in. clearance "over surface" and a "through air" clearance of ½ in. Made by **Ilsco Copper Tube & Products, Inc.,** 5751 Mariemont Ave., Cincinnati 27, O.



For more details circle NED-412 K3 on enclosed inquiry slip

Now Ready!

NEW CATALOG ON TUTHILL MODEL CK HIGH PRESSURE PUMPS

For Designers

For Production and Maintenance Men

Write for this new Tuthill Model CK Catalog No. 103.

It's a helpful guide to selecting the right pump for hydraulic service where the operating pressure does not exceed 400 p.s.i. Included is complete data on mechanically-sealed units and automatic reversing types in capacities from 5 to 200 g.p.m.

A copy is yours for the asking.

TUTHILL PUMP COMPANY

Dependable Rotary Pumps since 1927

939 East 95th Street, Chicago 19, Illinois

Canadian Affiliate: Ingersoll Machine & Tool Company, Ltd. Ingersoll, Ontario, Canada

For more details circle NED-413 K3 on enclosed inquiry slip

Precise SUPER 30

OUTWORKS, OUTLASTS ANY TOOL IN ITS FIELD

1/5 H.P. and 45,000 R.P.M. with precision in an AC/DC grinder-miller weighing only 35 ounces! Exclusive features include PRECISE Spindle and *draw collet chuck* for precision and quick, easy tool change. Operates *tungsten carbide* mills as efficiently as conventional rotary tools for grinding, milling, finishing and polishing any material including the hardest alloy steel. Micro-precision bearings; air-cooled, vibration-free motor. Unique PRECISE Mounts are available for set-ups on machine tools.

Write FOR NEW CATALOG

Precise PRODUCTS CORPORATION

1346 CLARK STREET • RACINE, WISCONSIN

For more details circle NED-414 K3 on enclosed inquiry slip

NOW! . . . a standard, low-cost heat exchanger tailored to your individual needs

You can now have the advantages of a custom-built heat exchanger at lower cost. Custom design features, never before available at competitive prices, are now built right into standard Pfaudler stainless steel heat exchangers.

Nozzles, for example, can be of any size and in any position. They can be either flanged or threaded. And you can select the most efficient combination of length and diameter for any given heat transfer area.

OUR NEW *FLEXIBLE STANDARDS* PROGRAM makes these tremendous savings possible. A wide range of tube sheets, bonnets, nozzles, tubes, baffles and other parts are carried in stock—ready for immediate assembly to your specifications. This system helps to speed deliveries, too.

RANGE OF LINE—The flexible standards program applies to fixed tube sheet, single or multi-pass, tube and/or shell side stainless steel units in diameters up to 10". In addition, Pfaudler heat exchangers are available with shell diameters from 4" to 24" in four basic types of construction . . . fixed tube sheet condenser, outside packed floating head design with removable tube bundle and shell, "U" tube construction with removable bundle.

TO SAVE YOU TIME ON HEAT EXCHANGER CALCULATIONS, this 40-page, fact-packed Pfaudler manual contains all the data you need to work out heat exchanger type and capacity problems. Easy-to-follow tables, curves and charts plus full details on Pfaudler heat exchangers. Mail the coupon for your copy.

Pfaudler

ENGINEERS AND FABRICATORS OF CORROSION-RESISTANT PROCESS EQUIPMENT

GLASSED STEEL — Hastelloy • Aluminum • Tantalum • Teflon
Carbon Steel • Solid or Clad Stainless Steel
Nickel • Inconel • Monel

THE PFAUDLER CO., Dept. NED 10, Rochester 3, N. Y.

Please send me the Pfaudler Heat Exchanger Manual No. 837

Name .....

Title .....

Company .....

Address .....

City ..... Zone .... State .....

For more details circle NED-415 K3 on enclosed inquiry slip

YOUR BEST DEFENSE *Against* EYE *Injuries*

the SAF-I-SPEC

- Featherlite Comfort and Smart Appearance assure employee acceptance.
- Low cost replaceable Optilite® lens.
- Fit over personal glasses.
- Meet Federal Spec. for impact and optical qualities.

Write for Literature and Prices

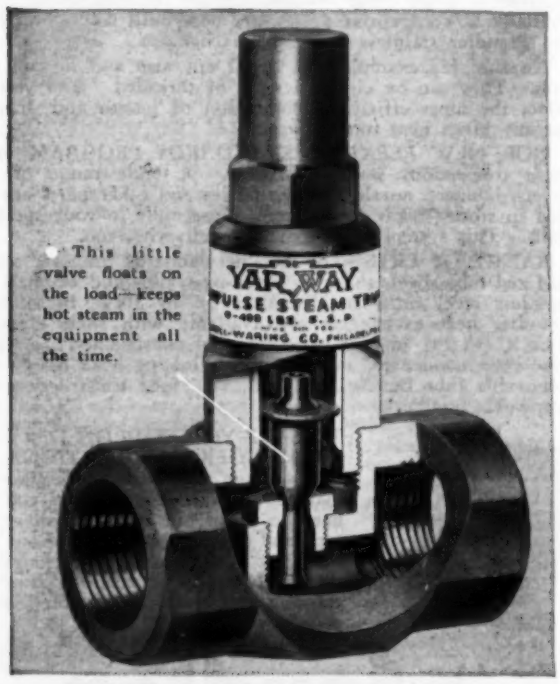
UNITED STATES SAFETY SERVICE CO.
KANSAS CITY 6, MISSOURI · BRANCHES IN PRINCIPAL INDUSTRIAL CITIES
In Canada PARMELEE, LTD. Toronto — Montreal

For more details circle NED-416 K3 on enclosed inquiry slip

THIS LITTLE VALVE CAN SAVE YOU MONEY

Your steam-heated equipment can turn out more production because of this little stainless steel valve.

It is the only moving part in a Yarway Impulse Steam Trap, and *it floats on the condensate load.* When steam is turned on, the little valve opens wide . . . discharges condensate and air *continuously* and brings the equipment *to production temperature in the shortest possible time.* After that, it passes, with a pulsating action, all condensate as it forms—*keeps a maximum, steady temperature in the equipment.* Result to you—more production per day.



This little valve floats on the load—keeps hot steam in the equipment all the time.

Other Yarway Impulse Steam Trap advantages—small size, low initial cost, easy installation, low maintenance, stainless steel construction, and quick availability from over 200 local industrial distributors.

Over 900,000 Yarways have been sold to nearly all industries. Write for free Yarway Trap Book T-1740.

YARNALL-WARING COMPANY
131 Mermaid Ave., Philadelphia 18, Pa.

YARWAY | impulse steam trap

For more details circle NED-417 K3 on enclosed inquiry slip

ULTRASONIC INSTRUMENT measures and tests various materials

Improvements in signal-to-noise ratio, picture clarity and line voltage correction over the original model MS-100 are incorporated in the new model MS-101 ultrasonic Metroscope. Instrument is used for nondestructive ultrasonic measuring and testing of metals and other materials. Wall thickness measurements or tests can be made from one side of the material, as in making propeller blades, tanks, pipes and drawn shapes. Instrument also finds internal defects of a laminar type in sheet materials and imperfect bonds between clad metals, switch contacts, cutting tool tips, etc. Made by **J. W. Dice Co.**, 1 Engle St., Englewood, N. J.

For more details circle NED-418 K3 on enclosed inquiry slip

GAS-SHIELDED WELDER has 450-amp continuous rating and gives constant arc length

For the consumable-electrode gas-shielded welding process, Fillerarc welding equipment will give high-speed metal deposition where filler metal must be added and provides simplified control, decreasing operator training time. It consists of a special generator, a pistol-like electrode wire holder and an electronic wire-drive unit. The generator has a continuous rating of 450 amp, and gives constant arc length, automatically producing any current required up to its full rating. Settings are for arc length only. The gun has knurled feed rolls which pull any standard electrode wire between 0.030 and 0.093-in. diameter at speeds from 0 to 750 in. per minute from the separate wire drive unit. It has a trigger controlling wire feed and gas flow, and is water-cooled.

Electrode wire of aluminum, stainless steel, mild steel, copper, magnesium and other alloys can be employed with the equipment using argon or helium shielding gas. The process can be used in downhand, vertical or overhead positions to weld any aluminum alloy in thicknesses from 1/32 to 3-in. and stainless steel from 1/16 to 1-in. It is also suitable for welding aluminum-bronze, nickel and magnesium. Made by **General Electric Co.**, Schenectady 5, N. Y.

For more details circle NED-419 K3 on enclosed inquiry slip

Leonard Tubemaster
TUBE
- *Flaring*
- *Beading*
- *Deburring*
- *Bending* MACHINES

Model 3CP-VD
¼" to 3" Capacity

Consult Our Tube Specialists Division for Production Tube Processing

LEONARD PRECISION PRODUCTS CO.
P. O. BOX 176 GARDEN GROVE, CALIF.

For more details circle NED-420 K3 on enclosed inquiry slip

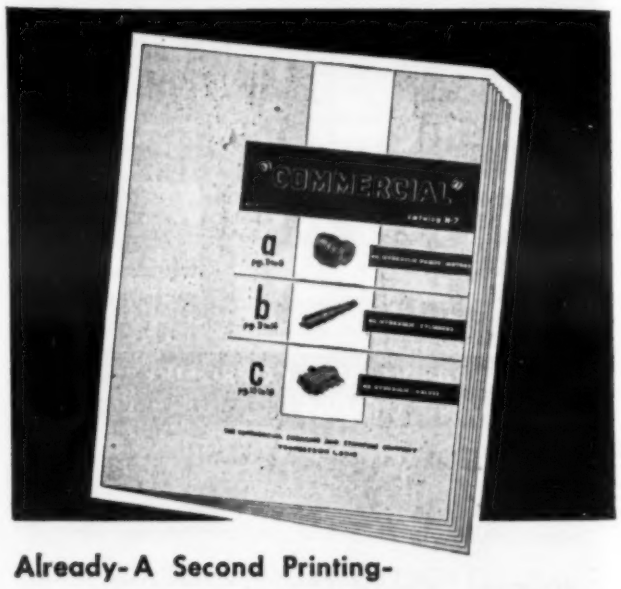
USE JOMAC®
INDUSTRIAL WORK GLOVES

For better hand protection. Jomacs will increase production by helping to reduce injuries in your plant. Made of Jomac Cloth—the famous thick, twisted loop pile fabric.

Write for our new illustrated catalog

WASHABLE • FLEXIBLE • INTERCHANGEABLE • RESIST CUTTING, PROTECT AGAINST HEAT AND COLD
C. WALKER JONES CO., PHILADELPHIA 38, PA.
Plants in Philadelphia, Pennsylvania and Warsaw, Indiana

For more details circle NED-421 K3 on enclosed inquiry slip



Already-A Second Printing-

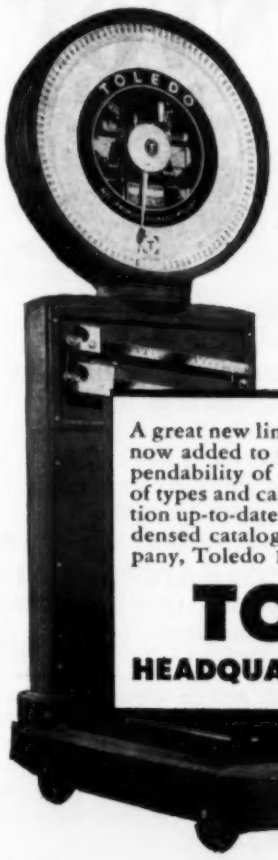
heavy duty COMMERCIAL HYDRAULIC *Fluid Power Controls*

PUMPS-MOTORS-VALVES-CYLINDERS

ASK FOR YOUR COPY OF CATALOG H-7, SECOND PRINTING

THE "COMMERCIAL" SHEARING AND STAMPING COMPANY
YOUNGSTOWN, OHIO · CHICAGO, ILL. · SALT LAKE CITY, UTAH

For more details circle NED-422 K3 on enclosed inquiry slip



new
44 Ways Better

A great new line of Toledos! *44 new features* are now added to the traditional accuracy and dependability of Toledo Scales. Complete range of types and capacities. Get your scale information up-to-date . . . write today for the new condensed catalog No. 2001. Toledo Scale Company, Toledo 1, Ohio.

TOLEDO®
HEADQUARTERS FOR SCALES

Model 2181 —New version of the world's most widely used portable dial scale.

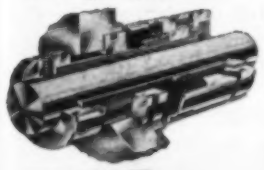
For more details circle NED-423 K3 on enclosed inquiry slip

JOHN CRANE CAN SUPPLY THE RIGHT SHAFT SEAL FOR YOUR APPLICATION!

"John Crane" offers a thoroughly comprehensive line of mechanical seals to meet every use and service condition. For new or old equipment...from pumps, agitators and speed reducers to washing machines and garbage disposal units...for handling water, oil, gas, chemicals or corrosives...from vacuums up to 1000 p.s.i. pressures...temperatures to 485°F.

Free! CATALOG!

Write today for our informative, fully illustrated catalog containing concise technical data and service recommendations on all John Crane Seals. Crane Packing Co., 1811 Cuyler Ave., Chicago 13, Ill.



JOHN CRANE CRANE PACKING COMPANY

For more details circle NED-424 K3 on enclosed inquiry slip

GUARANTEED GUARANTEED GUARANTEED GUARANTEED

PROVEN... INDUSTRIAL STACKED RETAINING RINGS

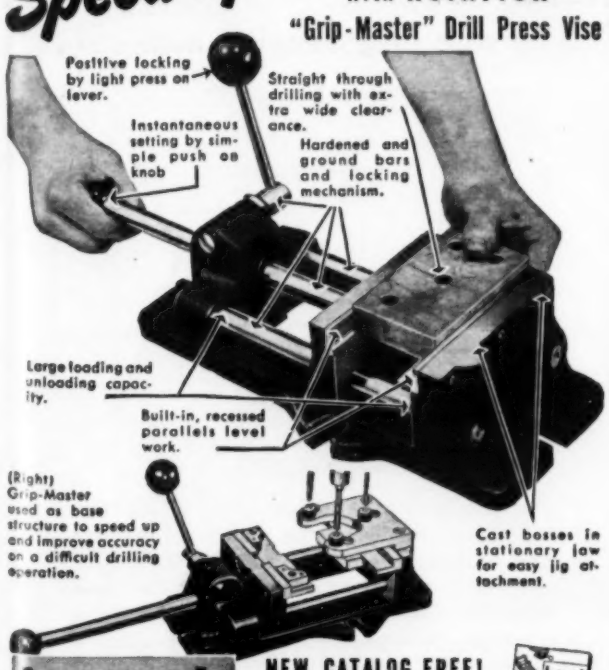
Proven success is the only success . . . and Industrial Stacked Retaining Rings have been adopted successfully by leading manufacturers in the country. Why? —Because they save time, labor and money. They're *guaranteed* to do the same for you by Industrial Retaining Ring Company . . . originators of stacked open-type retaining rings. Industrial's specially designed base and tool are free with initial order.

Write today for our illustrated brochure.

INDUSTRIAL RETAINING RING CO.
originators of Modern Dispensing
8 WEST SIDNEY AVENUE • MOUNT VERNON 8, NEW YORK

For more details circle NED-425 K3 on enclosed inquiry slip

Speed-up OPERATIONS with heinrich "Grip-Master" Drill Press Vise



heinrich TOOLS INC.

NEW CATALOG FREE!
Be sure you have a complete Heinrich Tool Catalog in your files. Your copy will be sent free upon request.

Dept. 303-K • RACINE, WISCONSIN
Drill Press Vises • Fixture Locks • Nibblers
Punches • Rod Cutters

For more details circle NED-426 K3 on enclosed inquiry slip

SPLIT ROLLER BEARINGS in fixed or floating types can be assembled around shaft

Applicable where it is impossible to mount conventional solid ball or roller bearings, Cooper Split Roller Bearings can be assembled around the shaft. Two types are available. Fixed or grooved-race units are used as shaft-locating and radial-thrust bearings, and expansion or floating types are used to accommodate end-play and shaft expansion.

Races are split on a diagonal to assure continuity of roller contact, and both races and rollers are through-hardened high carbon-chrome alloy steel. Cartridges have self-aligning spherically-ground OD, and are mounted in machined split pillow blocks. The halves of the inner race are clamped onto the shaft with locking collars, and bearing assembly is completed by placing the halves of the outer race in position. Units are made in England. For complete data write **Cooper Split Roller Bearing Corp.**, 700 Cedar Blvd., Pittsburgh 28, Pa.

For more details circle NED-427 K3 on enclosed inquiry slip

VACUUM LEAK DETECTORS make dry, nondestructive tests on parts to be fluid or air tight

Dry, nondestructive vacuum tests on small parts such as castings, weldments and assemblies that are to be fluid or air tight can be efficiently made by series of Junior vacuum leak detectors. Units are designed for bench operation and are supplied with vacuum pumps built into the unit or engineered to fit the application. Manually operated, semiautomatic and automatic models suitable for laboratory work or random to production testing with green and red light indicators are offered.

Units for indicating rate of leak are available for measuring flatness of finished surfaces or testing valves in internal combustion engines. Rate of flow through orifices can also be measured accurately by means of vernier method using vacuum. Water jet vacuum pumps capable of handling vacuums to 28 in. of mercury and in ½ to 200-hp sizes supplement this line of testers. Made by **Whittington Pump & Engineering Co.**, Dept. N, 1126 Prospect St., Indianapolis 3, Ind.

For more details circle NED-428 K3 on enclosed inquiry slip

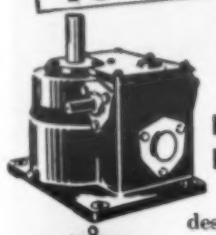
Exceptionally efficient on small close-tolerance work, these precision lathes offer you a logical way to lower machining costs. You'll also save on investment, power, tooling and maintenance. Their versatility permits applying this efficiency to a wide variety of jobs. A large selection of attachments and tools simplifies tooling for routine and special operations. Made in Quick Change Gear, Toolroom and Independent Change Gear models—bench and floor types. *Write for literature.*

SOUTH BEND LATHE
Building Better Tools Since 1906 • South Bend 22, Indiana

For more details circle NED-429 K3 on enclosed inquiry slip

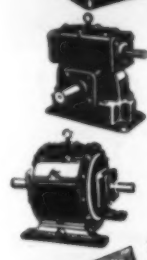
SPEED REDUCTION IS OUR SPECIALTY

Abart



BUILDERS OF SPEED REDUCERS FOR ALL INDUSTRIAL PURPOSES

Years of specialized engineering design and experience are embodied in the thoroughly comprehensive line of spur, worm, and combination speed reducers offered by Abart. Whatever your particular application, there is an Abart Speed Reducer exactly suited to the job. Oil-tight and sealed against dust, they are compact, quiet, power conserving, and exceptionally durable. Horsepower ratings range from 1/50 to 168; ratios to 10,000 to 1.



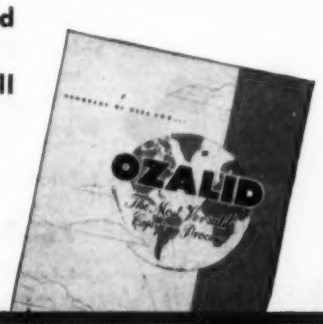
SEND FOR POCKET-SIZE CATALOG containing complete data on ABART SPEED REDUCERS and GEARMOTORS
SPUR GEAR DRIVES
WORM GEAR DRIVES
and COMBINATIONS

Abart GEAR & MACHINE CO.
4826 WEST 16th STREET • CHICAGO 50, ILLINOIS
Mfrs. of Gears, Speed Reducers and Gearmotors

For more details circle NED-430 K3 on enclosed inquiry slip

SEE HOW YOU CAN SAVE WITH OZALID COPIES!

Write Today for free, 48-page "100's of Uses" Booklet Showing How Direct Copies with Ozalid, Speed Paperwork and Cut Costs in All Departments.



Cut Copying Costs...Use OZALID

JOHNSON CITY, N. Y.
A Division of General Aniline & Film Corporation
"From Research to Reality"
Ozalid in Canada—Hughes Owens Co., Ltd., Montreal.

For more details circle NED-431 K3 on enclosed inquiry slip

Unit Heaters Need Super-Silvertop Steam Traps

To Insure TOP PERFORMANCE!

• Heaters need help in order to operate at top performance. The faster the heater is freed of air the quicker it is brought to maximum temperature. By draining condensate out of the core of the steam compartment at all times, the heater continues to deliver heat at its maximum output. Presence of water causes the trap to discharge immediately, preventing corrosion by removing gases and condensate.

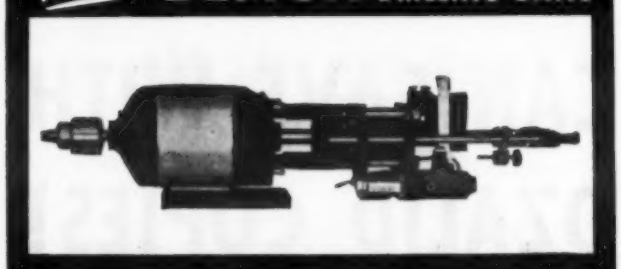
To select the proper size trap for unit heaters of various capacities, send for a free copy of "Solving Steam Trap Problems". Write

THE V. D. ANDERSON COMPANY
1958 West 96th Street • Cleveland 2, Ohio

THE V. D. ANDERSON COMPANY

▲ For more details circle NED-432 K3 on enclosed inquiry slip ▲

New BLACK SELF-CONTAINED DRILLING UNITS



NO SPLINES — Self-contained units, at low cost, for drilling, tapping, chamfering, reaming and similar operations.

NO GEARS — New principle employs traversing motor shaft for work spindle, applies even torque with practically no end play. Drill has air feed for rapid advance to work—hydraulic control to completion of work cycle with uniform feed. Tapping unit controlled so tap follows its own lead without chamfering first thread or stripping threads on return stroke. Easy adjustment—depth accuracy to within .001".

NO CAMS

NO CLUTCHES

NO REVOLVING WEIGHTS — Operate in any position. Wide range of speeds and sizes.

Write for complete information

BLACK DRILL COMPANY, INC.
1380 EAST 222nd STREET CLEVELAND 17, OHIO

▲ For more details circle NED-433 K3 on enclosed inquiry slip ▲

Get these facts!

ON QUICK, EASY PRODUCTION OF NYLON MAINTENANCE PARTS FROM POLYPENCO® NYLON ROD . . . STRIP . . . TUBING

These bulletins give full information on POLYPENCO nylon standard shapes. Cite examples of how to get *all* the advantages of nylon for maintenance parts by fabricating from standard shapes.

- Standard shapes (rod, strip, tubing)
- Formulation and characteristics
- Available sizes and length
- Recommended machining practice

CLIP AND MAIL COUPON NOW!

The Polymer Corporation of Penna., Reading, Penna.

Please send full technical and fabricating data ☐
rod, strip and tubing prices ☐

NAME..... TITLE.....
COMPANY.....
ADDRESS.....
CITY..... ZONE..... STATE.....
(Please print)

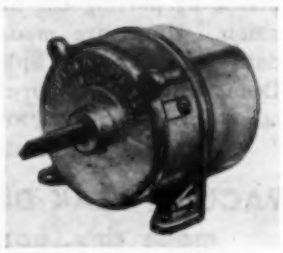
▲ For more details circle NED-434 K3 on enclosed inquiry slip ▲

OFFICE COPYING MACHINE designed for small volume users

Able to copy any material typed, written, printed or drawn on a sheet of translucent paper up to 9-in. wide and any length, the Bambino office copying machine is specifically designed for the small volume user. It produces copies at speeds up to 200 per hour, at a cost for letter-size copies of less than 1½ cents each. The entire unit is only slightly larger than the average electric typewriter. Made by **General Aniline & Film Corp.**, Ozalid Div., 16 Ansco Rd., Johnson City, N. Y.

▲ For more details circle NED-435 K3 on enclosed inquiry slip ▲

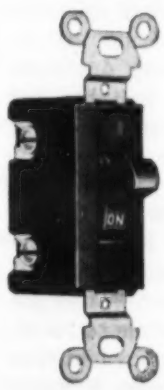
SHADED-POLE MOTOR available with or without gear units



For use in vending machines and similar applications, series 3000 shaded pole motor is available in several variations with or without gear units. It is completely enclosed in an aluminum motor housing, and the gear housing, if fitted, is of two piece design for easy access to gears. Gear ratios up to 2000 to 1 are available. The unit produces up to 120-lb-in. or without gear unit up to 1/200-hp at 3400 rpm. It can be mounted horizontally. Gears are lifetime lubricated, and motor has sleeve bearings with large oil reservoir. Made by **Howard Industries, Inc.**, 1217 State St., Racine, Wis.

▲ For more details circle NED-436 K3 on enclosed inquiry slip ▲

TUMBLER SWITCHES designed for ac service only



Rated at 15 amp 120 v and 15 amp 227 v ac only, series 4801 tumbler switches are available in single-pole, double-pole, three and four-way types with brown and ivory handles. Features include silver contacts, totally enclosed mechanism and concealed yoke. Body is plastic. Screw clamp terminals can be wired either straight in from the back or in the conventional side wiring manner. Terminal screws will accommodate stranded or solid wire up to No. 10. Applications include control of lighting and motors. Made by **Bryant Electric Co.**, Dept. NED, Box D, Barnum Station, Bridgeport 2, Conn.

▲ For more details circle NED-437 K3 on enclosed inquiry slip ▲

Pre-Cut to Save Time!

SPRING-FELT

Slashes production cost when assembly calls for "same-size" padding, gasketing, anti-scratch surfacing, anti-rattle protection . . . pressure-sensitive Spring-Felt pre-cut to length you need, using our new segmenting process.

Better Quality . . . In Less Time

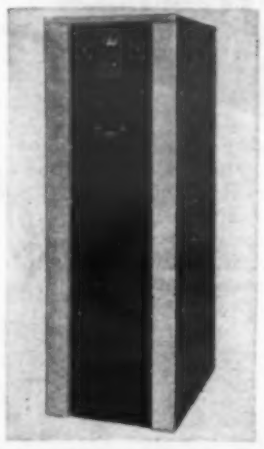
Makes good jobs better! Sticks with light finger pressure! Lasts and lasts! Impregnated and unimpregnated types. Pressure-sensitive or solvent-reactivated adhesive on one side. Thicknesses: 1/64", 1/32", 1/16", 1/8", 1/4". Widths: 1/8" to 36". Uncut or cut, as desired.

Write today for free Bulletin 501

Spring Packing Corporation
332 South Michigan Avenue • Chicago 4, Illinois

▲ For more details circle NED-438 K3 on enclosed inquiry slip ▲

PROTECT YOUR INVESTMENT in Electrical Equipment with G-E Voltage Regulators!



Automatically operated Inductrol—typical of sizes 12 to 24 kva (continuous ratings)

Hand-operated Inductrol—typical of sizes 300 and 600 volt-amperes (continuous) and 1200 volt-amperes (intermittent)

For maximum performance, longer life, and reduced maintenance your induction motors, lamps, electronic devices, resistance heaters, and other electrical equipment must operate at its rated voltage. The most economical and effective means of accurately maintaining this proper voltage is the G-E Inductrol (dry-type induction voltage regulator) available in standard catalog ratings for single- and three-phase circuits up to 520 kva and 600 volts.

For full details, call your G-E representative, agent, or distributor or write for Bulletins GEA-5824, GEC-795 and GET-2351. General Electric Company, Section 423-204, Schenectady 5, New York.

GENERAL ELECTRIC

▲ For more details circle NED-439 K3 on enclosed inquiry slip ▲

Another FLASH-O-LENS at work ...checking soundness of welds at INTERNATIONAL HARVESTER

By *lighting* and *magnifying* welded parts with FLASH-O-LENS, International Harvester Company's Memphis Plant guards against the most minute cracks in the welds.

FLASH-O-LENS offers a quick, simple way of detecting defects—of maintaining product quality. Built-in bulb brightly illuminates the inspection area—accurately ground lenses give sharp, detailed enlargement.

Battery and plug-in models from $10.65. Write for free literature on applications, types, prices.

E. W. PIKE & COMPANY
492 NORTH AVENUE ELIZABETH 3, N. J.

▲ For more details circle NED-440 K3 on enclosed inquiry slip ▲

Write for your copy of this new 32-page engineering manual . .

This new illustrated manual is full of information about Mueller Brass Co. brass, bronze and aluminum forgings . . . includes charts, graphs, facts and figures that give complete data about design factors, tolerances and the chemical, mechanical and physical properties of the MBC forging alloys. Get your copy of this valuable handbook today . . . it's yours for the asking.

MUELLER BRASS CO., PORT HURON 27, MICHIGAN
112-A

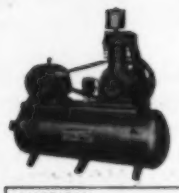
▲ For more details circle NED-441 K3 on enclosed inquiry slip ▲

IF YOU USE AIR
IN YOUR PRODUCT OR
IN YOUR PLANT

Look to

Kellogg-American

FOR COMPRESSOR PUMPS
Soundly designed, highly efficient. Precision built to deliver more *free air per hp.* Standard units available for pressures up to 200 p.s.i. Single or two stage, one or two cylinders.



FOR COMPLETE AIR COMPRESSORS
Known over 40 years for their efficiency, long life, quiet economical operation. Available in sizes from ¼ hp through 10 hp. Portable or stationary, skid or tank-mounted, electric motor or gas engine-driven models.
Write for Bulletin K-307-N

AMERICAN Brake Shoe COMPANY
KELLOGG-DIVISION
ROCHESTER 9, N. Y.

Kellogg-American

AIR COMPRESSORS PAINT SPRAY EQUIPMENT

▲ For more details circle NED-442 K3 on enclosed inquiry slip ▲

modernize materials handling with

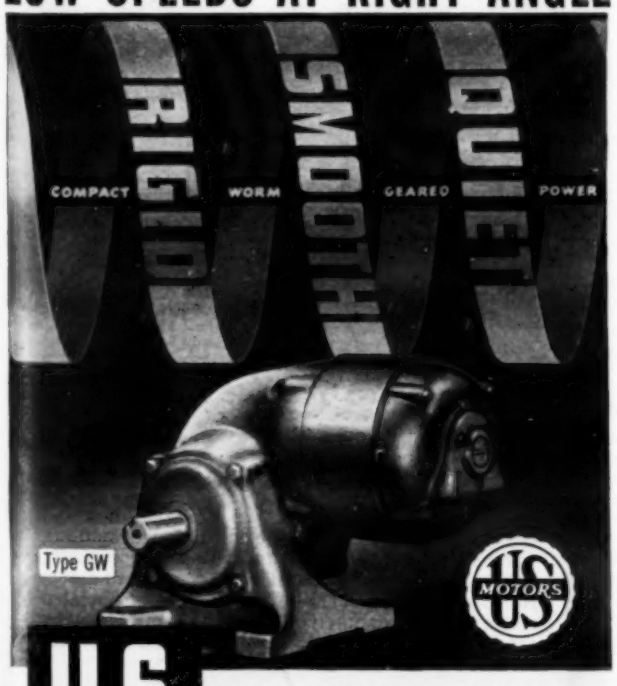
CARGOTAINERS

Cargotainers are designed to keep pace with modern methods of materials-handling because they are: 1. Sturdy and resistant to shock; 2. Readily folded when not in use; 3. Open mesh so that contents may easily be seen for quick inventory; 4. Efficiently designed for shipment, assembly line use, and vertical storage. Write for information concerning the new CLEARVIEW model with its exclusive base construction for greater durability and better locking and stacking. Dept. NED, Pittsburgh Steel Products Co., Grant Bldg., Pittsburgh 30, Pa.

Pittsburgh Steel Products Company
A Subsidiary of Pittsburgh Steel Company

▲ For more details circle NED-443 K3 on enclosed inquiry slip ▲

LOW SPEEDS AT RIGHT ANGLE



U.S. SYNCROGEAR MOTOR
20 to 155 RPM—¼ to 3 HP *Request Bulletin*
U.S. ELECTRICAL MOTORS Inc.
BOX 2058, LOS ANGELES 54, CALIFORNIA MILFORD, CONN.

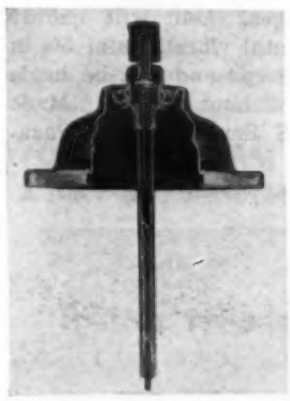
▲ For more details circle NED-444 K3 on enclosed inquiry slip ▲

WELDERS' & CHIPPERS' GOGGLES
plastic lenses are scratch resistant

Good ventilation, light weight and wearing comfort are features of line of Saf-I cup - type goggles which includes a chippers' goggle and two welders' types. The chippers' goggle has Optilite A plastic lenses which are scratch resistant. Optilite B plastic and hardened glass are also available. Rubber headband has rippled surface and an adjustable slide fastener to give positive fit and prevent slipping. Made by **United States Safety Service Co.,** 1329 Oak St., Kansas City, Mo.

▲ For more details circle NED-445 K3 on enclosed inquiry slip ▲

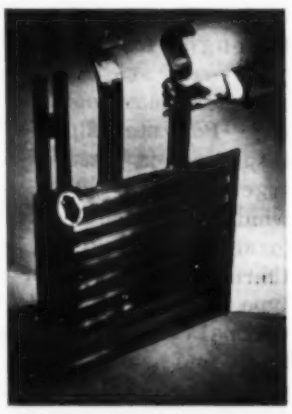
PRESSURE PAINT CAN VALVE
is self-cleaning during use



Especially designed for dispensing paint from pressurized cans, this Clean - O - Matic Valve cleans itself each time the valve is opened or closed, preventing clogging at any time. Each time the atomizer spray head is pressed down, a cleaning wire is moved in the paint syphon tube, breaking any seal that may have formed. This new pack is adopted by **Seymour of Sycamore, Inc.,** Dept. NED, Sycamore, Ill.

▲ For more details circle NED-446 K3 on enclosed inquiry slip ▲

LEAD PLATE HEATER
uses low pressure steam

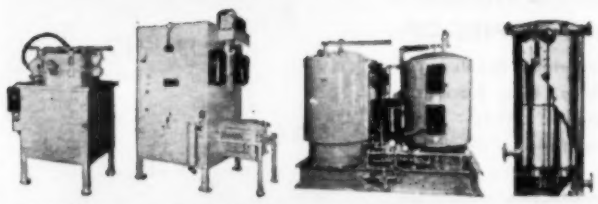


Available in three sizes with 6.6, 9.9 and 13.2 sq ft of heat transfer surface, lead plate type heaters are designed for use with corrosives in chemical and processing work. Light, compact and strong, lead plate heaters use 10 psi steam or less. Lead has exceptional resistance to corrosion from sulphuric, phosphoric and chromic sulphurous acids; sulphates and the like. Made by **Knapp Mills Inc.,** 23-00 Borden Ave., Long Island City 1, N. Y.

▲ For more details circle NED-447 K3 on enclosed inquiry slip ▲

HILCO LUBRICATING AND INDUSTRIAL OIL MAINTENANCE EQUIPMENT

'Saves You MONEY, OIL and MACHINERY



OIL RECLAIMER PURIFIER, RE-REFINER HIGH CAPACITY RECLAIMER FILTER

A COMPLETE LINE OF EQUIPMENT FOR RECLAIMING, FILTERING, PURIFYING AND RE-REFINING OIL.

★ Hilco units are available for continuous or batch operation. You can keep your lubricating and industrial oils clean and recover large quantities of oil at low cost.

Whenever Oil is used it becomes contaminated—must be discarded or conditioned for further use.

There is a HILCO to do This Job for You
Cleans Oil, Reduces Down Time, Increases Production!

★ Tell Us About Equipment You Are Operating and We Will Forward FREE Literature and Recommendations.

OIL PURIFIER DIVISION
THE HILLIARD CORPORATION
40 W. 4th ST. • ELMIRA, N. Y.
IN CANADA — Upton - Bradeen - James, Ltd.
990 Bay St., Toronto, 3464 Park Ave., Montreal

▲ For more details circle NED-448 K3 on enclosed inquiry slip ▲

NEW BOOKLET
tells how to reduce costly crane shutdowns

Get your free copy NOW!

● This informative booklet on U·S·S Special Crane Rails and Fastenings can help you reduce crane and runway maintenance costs. It describes our three Special Crane Rail Sections—which were designed to give longer service under heavy wheel loads—and shows a special technique of tight-joint-assembly which, when combined with a new conception of "floating-rail" fastening, will result in fewer delays in crane operation and less maintenance expense.

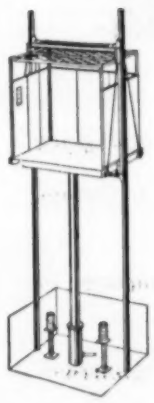
To get your copy, just send your name and address to United States Steel Corporation, Room 2817-D, 525 William Penn Place, Pittsburgh 30, Pa.

U·S·S SPECIAL CRANE RAIL SECTIONS USS
UNITED STATES STEEL

▲ For more details circle NED-449 K3 on enclosed inquiry slip ▲

Rotary Oildraulic®
HEAVY-DUTY ELEVATORS

Easy to install
economical to operate



FEATURES:
- Modern hydraulic operation
- No costly, unsightly penthouse
- Smooth starts and stops
- ¼" accuracy on landings
- Low operating and upkeep expense
- Rugged car construction
- Engineered for power truck loading
- High efficiency power units
- New Oildraulic Controller
- Capacities up to 100,000 lbs.

Over 75,000 Oildraulic elevators and lifts are now in use...backed by Rotary's coast-to-coast organization.

MAIL NOW FOR NEW CATALOG
ROTARY LIFT CO., 1018 Kentucky,
Memphis 2, Tenn.
Send catalog on Rotary Oildraulic Elevators to:
Name_____
Address_____

Rotary
OILDRAULIC ELEVATORS

▲ For more details circle NED-450 K3 on enclosed inquiry slip ▲

For Quick, Permanent Roofing

on any type of structure

TRUSCON FERROBORD® STEEL ROOFDECK

This strong, lightweight, steel roofdeck can be applied to any flat, pitched or curved roof structure. Large areas can be covered quickly. The members are so designed and formed that each unit firmly interlocks with the adjoining unit along the full length, achieving the maximum in lateral distribution of concentrated loadings. The members are fabricated in units long enough to span over three or more purlin spacings.

Ferrobord is manufactured from both 20-gage and 18-gage copper-bearing strip steel. Each unit is 6 inches wide and has a depth of either 1½" or 1¾". WRITE FOR FREE BOOKLET!

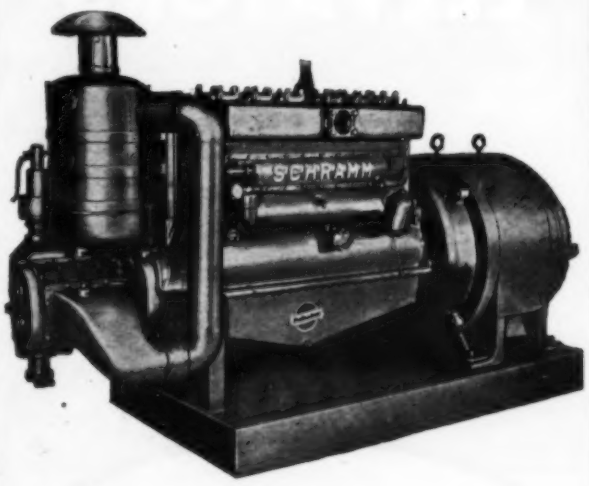
TRUSCON MARK OF MERIT PRODUCTS

TRUSCON® STEEL DIVISION
REPUBLIC STEEL CORPORATION
1096 ALBERT STREET • YOUNGSTOWN 1, OHIO

For more details circle NED-451 K3 on enclosed inquiry slip

SCHRAMM SUPER-Unistage

Air Compressor Offers Many Advantages . . .



A Super-Charged 600 c.f.m. Air Compressor Designed to meet your Compressor needs for . . .

COMPACTNESS...requires less floor space

UNIT SYSTEM... installed as a series, providing air as needed

VIBRATIONLESS... perfect balance of all moving parts

COMPLETE PACKAGE... no extras—everything one unit!

NO ELABORATE FOUNDATION... sturdy floor needed—that's all!

EASY TO MOVE... air where you need it—and want it!

WRITE FOR FREE COPY BULLETIN 5313

SCHRAMM, INC.

The Compressor People

WEST CHESTER • PENNSYLVANIA

For more details circle NED-452 K3 on enclosed inquiry slip

PRESSURE TRANSDUCER

resists heavy vibration and produces up to 50 v output

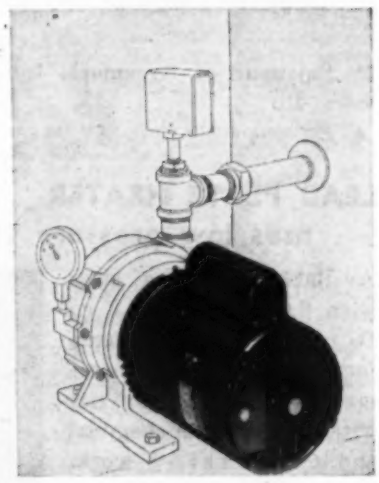
Adaptable to many uses in industrial, missile or aircraft applications, model 45176 pressure transducer can also be used as an altimeter and for air speed pressure or ram pressure measurement. Up to 50 v output can be obtained where an electrical signal proportional to pressure is required. Construction details include stable insulating materials such as glass, frictionless spring flexure pivot movement, and static and dynamic balancing. Weight is under 14 oz.

Output is linear with applied pressure, but linear outputs can also be supplied with altitude, air speed, or to natural or empirical functions. Dual outputs can also be provided, independent if desired. Ranges from 0-10 to 0-30 psi in 5 psi increments are available in special pressure ranges. Unit will operate when subjected to environmental vibrations of 5G in frequency range from 10-500 cps and can be made to withstand shocks of 40G without damage. Made by **G. M. Giannini & Co.**, 590 S. Fair Oaks Ave., Pasadena 1, Calif.

For more details circle NED-453 K3 on enclosed inquiry slip

JET PUMP MOTOR

in fractional horsepower ratings



Available in ¼, ⅓, ½, ¾ and 1-hp ratings, this jet pump motor is designed for all standard applications and can be mounted either horizontally or vertically. Ventilation system draws air in through louvered pulley-end casting for maximum cooling. Polyester film insulation is used, together with wire windings resistant to aging, moisture, oils, mild acids and alkalies and thermal shock. Other features include automotive-type grease fittings, locked bearings and automatic thermal protection. Capacitor helps start heavy loads, and switch assembly is part of the stator shell with all connections independent of the end shields. A drip cover is available as an accessory. Made by **General Electric Co.**, Schenectady 5, N. Y.

For more details circle NED-454 K3 on enclosed inquiry slip

DRY PHOTO COPIES of ANYTHING
RIGHT IN YOUR OWN OFFICE OR PLANT

YOU *INSTANTLY, AUTOMATICALLY* **GET COPIES OF:**

Blueprints, Drawings
Charts, Bids, Tracings,
Invoices, Letters
Documents, Contracts
. . . anything typed, . . written, printed or drawn

COPY 'EM ALL EXACTLY, WITH:

EXACT-PHOTE-COPY

ONE MACHINE DOES EVERYTHING!

It doesn't cost, it pays you to own the new, compact, fully automatic EXACT-PHOTE-COPY dry processing unit. Once and for all, eliminate costly errors, save time and money, speed-up office and plant procedure. There's NO darkroom. NO chemical fumes. NO washing. NO fixing. NO drying. Anyone can produce 60 to 90 exact photo copies per hour. Size 12" wide by any length, 1-side or 2-sides. Unit weighs only 47 lbs. 110V AC. Exterior in grey vinyl. Automatic timer and convenient carrying handle. There's a model for every requirement. Prices start at $105.00 for hand operated model. Made in U.S.A. FULLY GUARANTEED.

WRITE FOR BOOKLET TODAY!

GENERAL PHOTO PRODUCTS CO., INC.
Manufacturers of Dry and Wet Process Copying Equipment
GENERAL PHOTO BLDG., CHATHAM, NEW JERSEY

For more details circle NED-455 K3 on enclosed inquiry slip

NEW ADJUSTABLE DRILL JIG

eliminates layout; cuts drilling time

Used for drilling holes through round stock and hex stock from ¼" to 2" and cap screws from ¼" to 1¼", the new Mathewson Adjustable Drill Jig eliminates layout and can cut drilling time on small lots to a fraction. And it eliminates the costs of special jigs for larger quantities. Holes for cotter pins, set screws, drive pins for bayonet joints, oil holes in tubular sections, and wiring holes in cap screws, are all typical of the operation that can be done more economically with this jig. Hole diameters range from .052" to .531", using your A.S.A. standard slip bushings. The hardened V-block has two 60-degree V's for centering round or hexagonal stock, one for ¼" to 21/32" diameter, one for 21/32" to 2" diameter. Adjustable stop for locating work longitudinally for drilling any distance from end, may be used on either side. Adjustable bushing carriers hold slip bushings and clamp work securely. Jig highly successful in permitting use of inexperienced drill operators. For circular write to: **Mathewson Machine Works**, 22 Hancock St., Quincy, Mass. *Advt.*

For more details circle NED-456 K3 on enclosed inquiry slip

WESPO

T-BOLTS

BOLSTER & T-SLOT TYPES TO J.I.C. PRESS ROOM STANDARDS

Forged precision machined heat treated. Tensile strength 150,000 lbs.

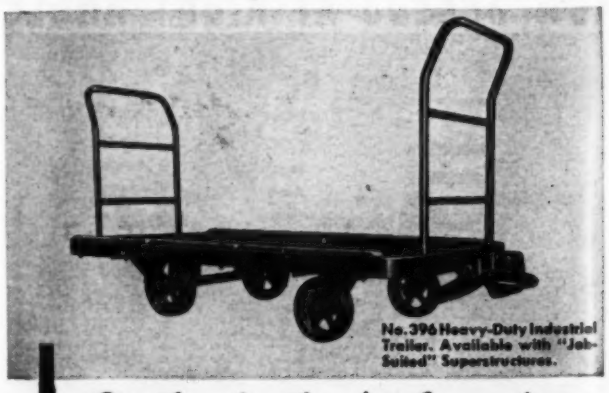
SIZES
BOLSTER BOLTS
—dia. to 1½" Heads sq. to 3" hex. to 2⅝" T-Slot bolts, ½", ⅝", ¾" dia. lengths to 12". 1" dia. 4" to 22" long.

NUTS—
hardened—threaded to close fit.
WASHERS—hardened — ground both sides.

Write for bulletin-prices

WEST POINT MFG. CO.
26945 W. 7 Mile Road Detroit 19, Mich.

For more details circle NED-457 K3 on enclosed inquiry slip



No. 396 Heavy-Duty Industrial Trailer. Available with "Job-Suited" Superstructures.

For Tractor Trailer Operation

2-TON HEAVY-DUTY INDUSTRIAL TRAILER

This Thomas "GENERAL" is doing a thousand heavy-duty jobs all over the world—in freight stations, warehouses, industrial plants, wherever a staunch, easy-running, caster-type trailer of time-proved design is needed. Rugged. 4000 lbs. capacity. Foot operated release disengages Safety Automatic Coupler quickly, safely from either side. Available with chemical resistant tires.

THOMAS TRUCK & CASTER CO.
366 Mississippi River
Keokuk, Iowa

Send for free literature

For more details circle NED-458 K3 on enclosed inquiry slip

1ST IN METAL TOOL BOXES

CASES—CHESTS—CABINETS

Here are the world's finest metal boxes. They're better constructed—better looking. Known for their fine materials—workmanship—attractive design. These boxes outlook—outlast—outsell competition. Write for FREE book, including complete information.

Waterloo

VALVE SPRING COMPRESSOR CO.
WATERLOO, IOWA

For more details circle NED-459 K3 on enclosed inquiry slip

ADJUSTABLE DRILL
cuts holes from 2 to 4-in. diameter

With two sets of blades, this adjustable drill will cut any size hole from 2 to 4-in. diameter. Illustration shows one drill with larger blades in the extreme extended position, and another with the small blades in the extreme contracted position. A scroll ring engaging the bottom sides of the blades performs the double function of blade adjustment and gives support against cut thrust. Body of the drill is fabricated from heat treated alloy steel, and standard blades of high speed steel, though carbide blades are also available. The tool can be used on drill presses and radial drills, also on horizontal boring mills, jig borers and milling machines, etc. Blades are easily modified to produce round corners, angular surfaces and other bore profiles. Made by **Hayden Twist Drill Co.**, Dept. B, 8626 Lyndon Ave., Detroit 38, Mich.

For more details circle NED-462 K3 on enclosed inquiry slip

Solenoid Valves for air & hydraulic cylinders
fluid shut-off
diaphragm operated equipment
coolant control

"M" SERIES pilot-operated Skinner Valves have extremely fast action, and large capacity on air, inert gas and liquid applications. All internal metal parts are stainless steel or brass. Soft seals prevent leakage — operate in any position — rubber coated, nylon fabric diaphragm for long life — port size ½" or ¾", orifice ¾" — power consumption, 10 watts — continuous duty.

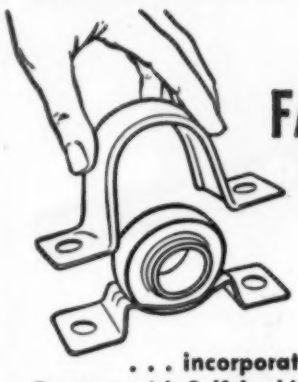
M2 is two-way, normally closed, 5 to 150 p.s.i., weight 3 lbs. M3 is three-way, normally closed, normally open, or directional flow, 20 to 150 p.s.i., weight 3¾ lbs.

Write for Bulletins No. 493 & 494

Skinner ELECTRIC VALVE DIV.
THE SKINNER CHUCK COMPANY
112 Edgewood Avenue, New Britain, Connecticut

For more details circle NED-466 K3 on enclosed inquiry slip

NEW! LOW-COST PILLOW BLOCK



FAFNIR Type PB
"Economy Package"

. . . incorporates Fafnir Wide Inner Ring Bearing with Self-Locking Collar.

The new Type PB Series Pillow Block is developed to fill a specific need for a high-quality, *precision* ball bearing unit *at lowest possible cost*. It is designed for *light duty* applications. Send for descriptive bulletin. The Fafnir Bearing Company, New Britain, Connecticut.

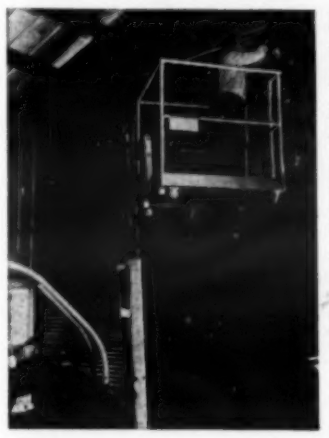
OUTSTANDING FEATURES INCLUDE

- Two-piece, separable pressed steel housing.
- Self-alignment at assembly
- Compact . . . lightweight
- Pre-lubricated bearing . . . Plya-Seal protected
- For shaft sizes up to and including 1¼".

FAFNIR BALL BEARINGS
Most Complete Line in America

For more details circle NED-460 K3 on enclosed inquiry slip

WORK PLATFORM
for use with fork lift truck



For use in conjunction with a fork lift truck, the Heco safety work platform provides easy and safe access to work at any fork lift elevation. It has a four-way fork entry, measures 42 x 42 x 42 in., and has a hinged gate at one side and a chest high safety rail all around. The floor is faced with a 4-in. toe plate and the entire unit is mounted on 3-in. rubber casters so that it can be easily moved when not in use. A portable lightweight metal tool box can be obtained as an accessory. A safety work stand is also available for use with the unit. This elevates the platform to a fixed height of 5 ft, and is fitted with a ladder on one side. Made by **Hamerslag Equipment Co.**, 45 Elmira St., San Francisco 24, Calif.

For more details circle NED-463 K3 on enclosed inquiry slip

DO YOU KNOW? Originally developed for use by their own engineering department, a data sheet giving complete standard nut and bolt dimensions and thread data is being offered free to any engineers or designers that write to Murphy Diesel Co., 5317 W. Burnham St., Milwaukee 14, Wis.

For more details circle NED-464 K3 on enclosed inquiry slip

NEWS about NEW DUST COLLECTOR Design 4 Type N ROTO-CLONE

Design 4 Type N ROTO-CLONE, Arrangement C, designed for continuous sludge removal.

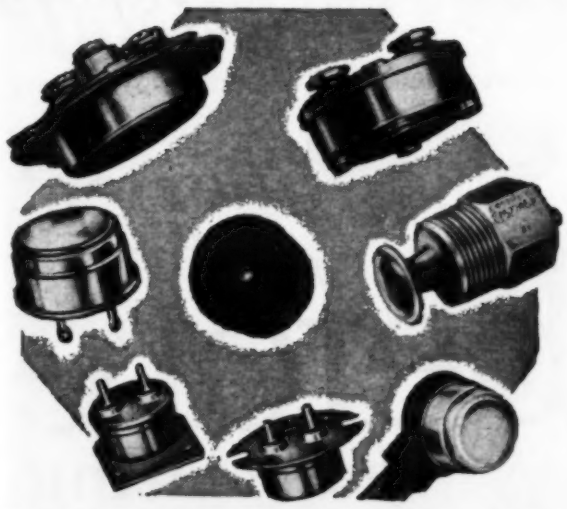
This new version of AAF's famous Hydro-static Dust Collector adds many features to further reduce and simplify maintenance, increase service life and lower cost—yet retains the same cleaning action proved so effective in the collection of magnesium dust, buffing dust, lead oxide, lime and abrasive dust.

For complete information on the new Design 4 Type N ROTO-CLONE, write for Bulletin No. 277 or call your local AAF representative.

AAF American Air Filter COMPANY, INC.
391 Central Avenue, Louisville 8, Kentucky
American Air Filter of Canada, Ltd., Montreal, P. Q.

For more details circle NED-467 K3 on enclosed inquiry slip

KLIXON Thermo-Snap CONTROLS



Today . . . in practically every industry . . . Klixon Snap-Acting Thermo-Snap Controls are meeting the requirements for dependable, trouble-free performance in temperature control applications.

The reason for their wide acceptance is the actuating element . . . the scientifically calibrated Spencer thermostatic disc. This simple, foolproof element instantly snaps the circuit open with a quick break or snaps it closed to a solid make. It eliminates toggles, magnets and other complicated parts and is particularly suitable for use involving motion, altitude, shock and vibration . . . regardless of mounting position.

Klixon Thermo-Snap Controls, hermetically sealed and open types, are available in many types, shapes and sizes, in a wide variety of operating temperature ranges.

Write for complete information.

SPENCER THERMOSTAT
Division of Metals & Controls Corporation
1110 FOREST ST., ATTLEBORO, MASS.

KLIXON

For more details circle NED-461 K3 on enclosed inquiry slip

Shells, beads, or American dollars—no enterprise is successful unless it shows a profit. Kester quality and performance assure you profitable production results at the lowest possible cost. To put more "wampum" in *your* "wigwam," always insist on Kester Solder!

HAVE YOU written for your free copy of the Kester Technical Manual, "SOLDER and Soldering Technique"? Won't you do it today?

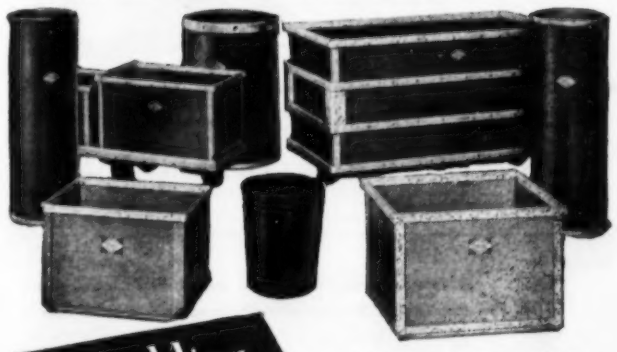
KESTER SOLDER COMPANY

4249 Wrightwood Avenue • Chicago 39, Illinois
Newark 5, New Jersey • Brantford, Canada

For more details circle NED-465 K3 on enclosed inquiry slip

SEND FOR FREE CATALOG ON SPAULDING FIBRE RECEPTACLES

A complete line of tough, lightweight, shock-proof containers for storage and materials handling. Resistant to moisture, impact and abrasion. Won't splinter or corrode.



Spaulding

Boxes, barrels, trays, trucks in all sizes and weights.

SPAULDING FIBRE CO., INC., DOVER, N. H.

Please send me by return mail your catalog on Spaulding's complete line of Fibre receptacles.

Name _____
Firm _____
Address _____
City _____ Zone _____ State _____

For more details circle NED-468 K3 on enclosed inquiry slip

DILLON DYNAMOMETERS

can solve your tension or stress problems

The perfect instrument for indicating tension or stress in cable, rope, castings, assemblies, etc.—in field or laboratory. Easy to use in close quarters—measures 8¼" x 6¼" x 3", weighs only 8 lbs. 4 oz. Not injured by accidental overload. Has safety glass cover and maximum hand. 500 to 100,000 lb. capacities. Low cost. Immediate shipment.

By using a Dillon Dynamometer in this special draw-bar arrangement, the Ruth Company, Denver, Colorado, manufacturers of mining locomotives, has proved a money-saving point. They found that locomotive horsepower—not weight—is the all-important factor in achieving economical mine haulage. Result: thousands of dollars saved in several mines!

Write today for illustrated bulletin

W. C. Dillon & Co., Inc.

14620NE Keswick St.
VAN NUYS, CALIFORNIA
(Suburb of Los Angeles)

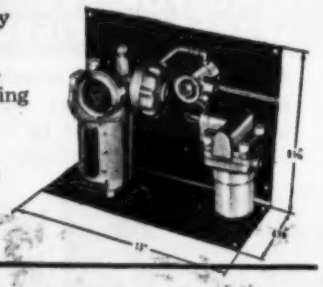
▲ For more details circle NED-469 K3 on enclosed inquiry slip ▲

Steel-Maker...
extends bearing life 11 times!

ALEMITE OIL-MIST

Saves its cost each week-
eliminates lubrication down-time

Costly High-Speed Bearings Failed Week after Week on a key production machine. Costs piled up. The company turned to Alemite—installed an Oil-Mist unit costing little more than $100. *Result:* $220 saved first week. Today—11 weeks later—no signs of bearing wear; only three ounces of oil used per shift where a pound and a half of grease were required before!



Alemite Oil-Mist is a fully automatic system which atomizes oil into mist . . . distributes it through tubing to bearings . . . applies a constant uniform oil film to groups of bearings designed either for oil or grease lubrication.

delivers oil to bearings 3 ways

1. Oil-Mist as Such. For any type of anti-friction bearing—ball, roller or needle.

2. Oil in Spray Form. For open and enclosed gears and chains. Nozzle partially condenses mist so that it can be directed onto a concentrated area.

3. Oil-Mist Condensed. For plain bearings, slides, ways, vees, cams and rollers. In these applications, condensing fittings convert oil mist to liquid oil.

Get the facts NOW!

Let us send you the complete story on Oil-Mist. Specifications, models, typical applications, actual case histories. Get yours now. Write Alemite Division of Stewart-Warner, Dept. NED-103 1850 Diversey Parkway, Chicago 14, Illinois.

▲ For more details circle NED-470 K3 on enclosed inquiry slip ▲

INTEGRATOR-INDICATOR for mounting in graphic panels

Incorporating a full size integrating mechanism and a standard 5-digit counter, this small integrator-indicator which measures 6 x 6 x 14⅝ in., indicates instantaneous rate and continuously integrates the measured variable. Flow rate of the measured liquid or gas is sensed and totaled 24 times a minute, permitting various flows to be totalized to accuracies within 1 per cent of full scale. The mechanism operates on pneumatic signal pressures from 3 to 15 psig, and its totalizing mechanism is oil-immersed to assure cleanliness and freedom from wear and corrosion. Unit can be combined with an impulse-type counter to operate shut-off or other end point control devices after a certain flow has been measured. Made by **Fischer & Porter Co.**, 15 Jacksonville Rd., Hatboro, Pa.

▲ For more details circle NED-471 K3 on enclosed inquiry slip ▲

ELECTRIC STRADDLE TRUCK loads tilt back to stabilize

Design of this electric rider-type straddle truck permits loads to be tilted 4½ degrees backward, and gives stability without affecting unit load capacity. The tilting action takes place automatically, and is actuated by a cam in the upright channels as the load is lifted. The truck is suitable for narrow aisle operation and can right-angle stack in aisles 6-ft wide or less. A single lifting cylinder allows a clear view of fork and outrigger tips for close operations. A dead man control is also provided which cuts off power and applies the brake when the operator leaves the truck. Made by **Yale & Towne Mfg. Co.**, Yale Materials Handling Div., Dept. M-1, Roosevelt Blvd. & Haldeman Ave., Philadelphia 15, Pa.

▲ For more details circle NED-472 K3 on enclosed inquiry slip ▲

Ball & Roller Bearings

Morton Bearing Co.—Bearings illustrated and specified in 10-page catalog include flat race ball thrust, grooved race ball thrust, banded ball thrust and roller thrust types. Some special ball thrust bearings are illustrated also.

▲ For more details circle NED-473 K3 on enclosed inquiry slip ▲

a new way to

expand Hi-Pressure tubes in
- Heat Exchangers
- Condensers
- Boilers

- fully automatic
- for thick tube sheets

AIRETOOL AUTOMATIC RETRACTIVE TUBE EXPANSION CONTROL SYSTEM

Now, eliminate step rolling. Assure tight, leakproof joints every-time. The AIRETOOL Retractive Method of tube expansion draws metal toward tube mouth, prevents inward elongation. The tube is expanded for a short section at the far surface of the sheet. The motor shuts off at full expansion, and the expander automatically retracts, giving full expansion through the full thickness of the sheet . . . in one fast operation.

For full details, descriptive literature, write to:

The AIRETOOL Manufacturing Co., Springfield, Ohio
Branch offices: New York • Chicago • Philadelphia • Houston • Tulsa
Baton Rouge • Hudson Heights (NJ)
Representatives in principal cities of U.S.A., Canada, Mexico, South America, England.

▲ For more details circle NED-474 K3 on enclosed inquiry slip ▲

New Becker Model "53" Spray Gun, specially engineered for industry, sprays protective coatings, paints, solvents, cleaners, oils, etc. *Completely portable!* Powerful CO_2 cartridge (10 for $1.00) sprays up to one 21-ounce containerful. Tank can be charged from air hose (for liquids atomizing at 120 psi), with special attachment. Rugged steel tank, machined brass and stainless inserts, cast aluminum head. See your Distributor or order direct postpaid.

SULLIVAN-BECKER CO. Dept. 173-K KENOSHA, WISC.

▲ For more details circle NED-475 K3 on enclosed inquiry slip ▲

A well-designed hydraulic circuit can help bring soaring costs down to earth . . . in your product, in your plant. The best-designed hydraulic circuits are built around Gerotor pumps . . . for high efficiency, longer life, less slippage, more uniform flow. Specify Gerotor!

GEROTOR MAY CORP., BALTIMORE 3, MD.

▲ For more details circle NED-476 K3 on enclosed inquiry slip ▲

ENAMELSTRIP

STEEL · ALUMINUM · BRASS · PRE-FINISHED COLOR COIL

assures a perfect finish

before fabricating

You can easily cut production time and cost with Enamelstrip, the continuous-feed, pre-colored metal coil. Leading manufacturers of metal products are using it with outstanding results in a wide variety of items. Enamelstrip's exclusive, flexible finish withstands the stresses of drawing, bending and forming without cracking or peeling. Many companies have entirely eliminated their finishing departments! Any metal in any finish will be coated and slit to your own specifications.

Write TODAY for detailed color bulletin.

THE COATED COIL CORPORATION
507 West 30th Street, New York 1 • LOngacre 5-3161

▲ For more details circle NED-477 K3 on enclosed inquiry slip ▲

Wire Shapes and Forms TO YOUR SPECIFICATIONS

● Your wire forms are produced fast, accurately and at low cost with Sommer mass-production methods.

Speedy, automatic plating equipment handles either large or small assemblies. Popular new Zinc Iridite process adds a bright, durable, economical finish.

Sommer offers complete forming, stamping, cut-threading and butt-welding services. Let us work with you in designing and producing any wire shapes or forms needed for your defense contracts. Send sample, blueprint or drawing—see how Sommer can save you time and money.

SOMMER METALCRAFT CORPORATION
200 POSTON DRIVE
CRAWFORDSVILLE, INDIANA

▲ For more details circle NED-478 K3 on enclosed inquiry slip ▲

Application UNKNOWN *

—Heat Transfer

The requirements of your Heat Transfer application are unknown to us at Schutte and Koerting Company. But whether the requirements are standard or whether they demand engineering consultation, we would like to serve you by applying our engineering and manufacturing resources to your HT problem.

It would pay you to investigate our HT facilities. Do this by requesting a copy of our Bulletin HT-1 and a copy of Vol. 5 No. 3 Engineering News.

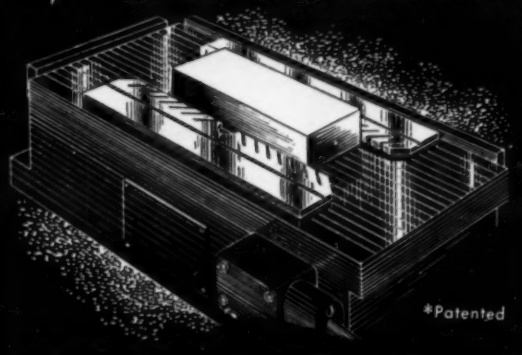
*A special, cupro-nickel unit designed and manufactured by SK for cooling a corrosive sodium carbonate solution.

SCHUTTE AND KOERTING CO.
28 State Road, Cornwells Heights, Bucks County, Pa.

▲ For more details circle NED-479 K3 on enclosed inquiry slip ▲

Magna-Vise*

...INCREASES THE VALUE OF YOUR MAGNETIC CHUCKS
...ENABLES THEM TO HOLD *any* rigid non-magnetic material



*Patented

Get full details on this revolutionary shop-proved device...write Dept. ND-103

Hanchett MAGNA-LOCK CORPORATION
Magna-Lock
Magnetic Chucks and Devices
BIG RAPIDS • MICHIGAN, U.S.A.

▲ For more details circle NED-480 K3 on enclosed inquiry slip ▲

SAFETY SWITCHES
complete line is fully enclosed

Produced in 30, 60, 100 and 200 amp ratings for either 240 v ac or 250 v dc and 600 v ac/dc service, NEMA X11 safety switches are designed for the machine tool and processing industries as well as industrial plants requiring a switch enclosure which will exclude dust, dirt, oil and coolants. Heavy steel box cover is sealed by a neoprene gasket (shown inset) and is closed by latch and captive screws. Cover and operating mechanism are interlocked, and no conduit openings or knockouts are provided, each installation being "tailor-made." Switch and mechanism are of heavy duty visible blade type with magnetic blowout plates, nontracking insulation, silver plated copper parts and pressure fuse clips. Made by **Square D Co.**, 6060 Rivard St., Detroit 11, Mich.

▲ For more details circle NED-481 K3 on enclosed inquiry slip ▲

GUMMED TAPE SEALER
has pushbutton tape length selector

A pushbutton selector for the length of tape desired is feature of this 3-in. Mazurmaster automatic gummed tape sealing machine. After button is pressed, handle is pulled down, dispensing the indicated length evenly moistened. For repeats of the same length of tape, or for long strips, machine is equipped with a production lever control. Other features are controlled tape-roll tension, adjustable tape feed rollers, precision-ground knife and positive moistening control. Body is cast aluminum and water-contacting parts are stainless steel. Another model, the 3-in. Speedipak, is offered with a tape length scale instead of pushbuttons. Made by **A. C. Hummel Co.**, 5381 Kennedy Ave., Cincinnati 13, O.

▲ For more details circle NED-482 K3 on enclosed inquiry slip ▲

Lighting Fixtures

Electro Silv-A-King Corp. — A complete line of lighting fixtures is presented in a new illustrated 80-page catalog. It includes commercial and industrial fluorescent and incandescent types, and provides illustrations, descriptions, dimensional data, lighting curves, etc., on all units.

▲ For more details circle NED-483 K3 on enclosed inquiry slip ▲

"Canton"
THE LOW COST CRANE with a HUNDRED USES

Just one of a hundred lifting and transporting jobs made easy with a CANTON Portable Crane. Loads up to 3 tons can be moved anywhere in the shop by one man.

The HILL ACME CO.
"CANTON" DIVISION 1201 W. 65TH ST., CLEVELAND 2, OHIO

▲ For more details circle NED-484 K3 on enclosed inquiry slip ▲

new method of **process heating** and **cooling**

*saves 50%

* in initial cost
* in heating and cooling time
* in tank space
* in maintenance labor

Each member of your buying committee should have this book which tells how Platecoils satisfactorily solve tank heating and cooling problems . . . and at the same time save time, money and manpower.

PLATECOIL REPLACES PIPE COILS

Write for your free copy of Bulletin P57 today!

TRANTER MANUFACTURING, Inc., LANSING 4, MICH.

▲ For more details circle NED-485 K3 on enclosed inquiry slip ▲

This special fiber Pittsburgh Brush has removed excess solder from seam of can shown emerging from cleaning machine—at the American Can Company.

"Wouldn't be without them!"
say the men who use . . .

Power-driven Pittsburgh Brushes for longer life, better work!

Last longer, much safer—Cloth brushes formerly used at the American Can Co., Jersey City, to wipe excess solder from can seams lasted less than an hour, occasionally caught fire. Switching to special fiber Pittsburgh Brushes, American Can now gets better than 15 hours life per brush and the fire hazard has been eliminated. Supervisory personnel reports: "We wouldn't be without them!"

Last longer, do better job—In producing wall and ceiling panels, at the Barclay Manufacturing Co., New York City, dust caused by routing "mortar lines" settles on the panels, must be completely removed before panels can be bake-finished. Brushes originally used had a short life span, wore unevenly, and did so poor a job that many baked panels had to be completely refinished to pass inspection. Since even a "fairly good" brush would not do, Barclay searched for the "perfect" brush—and chose Pittsburgh! Result: Better work, and costly refinishing eliminated.

Last longer, better constructed—The Windalume Corporation, Kenvil, N. J., manufacturers of aluminum windows, uses Pittsburgh wire brushes to remove burrs caused by milling. The wire bristles on the brushes used formerly broke off easily. Windalume replaced them with Pittsburgh Brushes because they are better constructed—and Pittsburgh Brushes last longer!

WRITE TODAY FOR FREE BOOKLET!
Write today for a free copy of our booklet that shows, through actual case histories, how Pittsburgh can help cut *your* brushing costs. Address: PITTSBURGH PLATE GLASS COMPANY, *Brush Div.*, Dept. W-4, 3221 Frederick Ave., Baltimore 29, Md.

PITTSBURGH *Power Driven* **BRUSHES**

BRUSHES • PAINTS • GLASS • CHEMICALS • PLASTICS • FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY
IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

▲ For more details circle NED-486 K3 on enclosed inquiry slip ▲

FOR YOUR TOUGHEST JOBS NEW OTC

30 TON POWER-TWIN Hydraulic Puller

BIG BROTHER TO THE FAMOUS 17½ TON POWER-TWIN

FAMOUS CENTER HOLE

Lets Power-Twins do jobs thought impossible... unlimited adjustment... eliminates torque, friction... versatile interchange of parts.

Dynamite . . . the tough 30 ton OTC Power-Twin Hydraulic Puller . . . saves hours and dollars on every overhaul job. Light . . . compact . . . safe remote control. Gives 30 tons of power with only 100 pounds of pump pressure. Complete Hydraulic Puller sets for both 30 ton and 17½ ton Power-Twin.

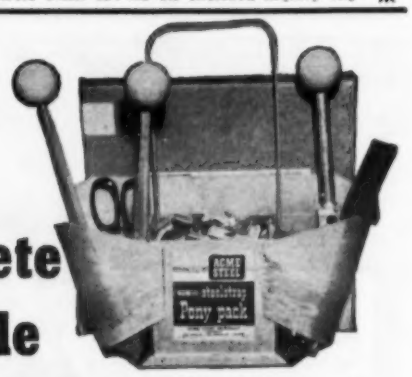
WORKS WONDERS

Power-Twin pulls or installs bearings, gears, pinions, shafts, studs, wheels, pulleys . . . also performs as a heavy jack, straightener or compressor.

See your jobber for complete information or write us.

OWATONNA TOOL COMPANY
436 CEDAR STREET • OWATONNA, MINNESOTA

For more details circle NED-487 K3 on enclosed inquiry slip



Complete Portable Steel Strapping Kit

New Acme Steel "Pony Pack" is lightweight, complete with tools for fast, low-cost strapping

Here's a handy, portable strapping outfit for fastening, re-coopering, securing, or reinforcing anything, anytime, anywhere.

It's Acme Steel's new "Pony Pack." Weighs about 20 pounds. Metal carrier contains 300-foot coil of Acme Steel Strapping, a stretching tool, sealing tool, seals and snips. For details, write Acme Steel Products Division, Dept. NED-103, ACME STEEL COMPANY, 2840 Archer Ave., Chicago 8, Ill.

ACME STEEL

STRAP IT...STITCH IT...SHIP IT...SAFELY!

For more details circle NED-488 K3 on enclosed inquiry slip

PET POWER TOOLS

You get ALL these features when you buy PET DRILLS!

If you want the best, take an extra look at the PET Superduty Drill above! Here's a continuous-duty drill—built to *work* right and *handle* right.

And, the price is right, too! All features shown are *standard* in PET Superduty Drills—at a *standard drill price!* Complete line of 54 ¼", ⅜" and ½" models gives you wide selection—in pistol or saw-type grip. Use coupon below to get complete facts!

PORTABLE ELECTRIC TOOLS, INC., 320 W. 83rd St., Dept. ND-103, Chicago
In Canada: Portable Electric Tools, Ltd., 452 Birchmount Rd., Toronto

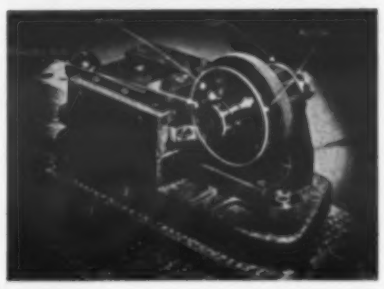
MAIL COUPON FOR FREE BULLETIN

Please send me free PET Superduty Catalog and name of nearest distributor.

Name_____ Title_____
Company_____
Address_____
City_____ State_____

For more details circle NED-489 K3 on enclosed inquiry slip

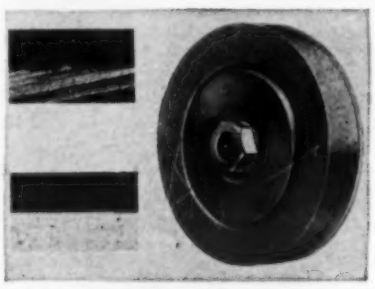
CAM CONTOUR GAGE
optical type for irregular contours



This optical cam gaging fixture permits rapid and precise inspection of either regular or irregular cam contours. The cam to be inspected is mounted on an arbor which is turned by hand, actuating a follower which carries an indicator ball. Contour and tolerance lines are marked on a glass reticle, also mounted on the revolving fixture arbor. As the arbor is revolved, indicator ball shows cam accuracy by following the tolerance lines, projected in magnified form onto an inspection screen. The fixture is used in combination with a Kodak contour projector, and various magnifications are available, giving gaging tolerances as close as 0.0005-in. Process can be performed by unskilled help. Made by **Optical Gaging Products, Inc.,** Forbes & Salina Sts., Rochester 11, N. Y.

For more details circle NED-490 K3 on enclosed inquiry slip

DUAL GRINDING WHEEL
for carbide cutting tools



Pensco dual grinding wheel consists of a 120-grit silicon carbide vitrified bond outer grinding wheel for dry finishing grinding and a phenolic resin diamond lap insert for diamond lapping. Developed for sharpening carbide cutting tools, the wheel is reported to increase tool life from three to eight times over other finish edge grinding methods. Lap insert is impregnated with spectrum diamond lapping compound of the desired size for lapping the cutting edge to a smoothness of 1 to 2 rms. Wheel can be used on most tool grinders and is supplied with a kit that includes a tube of diamond paste in any one of 12 standard grit sizes, diamond lapping oil with atomizer applicator and wheel charging roller. Made by **Penn Scientific Products Co.,** 5941-A Alma St., Philadelphia 24, Pa.

For more details circle NED-491 K3 on enclosed inquiry slip

DO YOU KNOW? The Norwood water-cooled pressure pick-up for use with gas temperatures up to 5000°F is almost as small as a cigarette. It is expected to be particularly useful in current research activities on rocket propellants and jet engines. Developed by Control Engineering Corp., 560 Providence Highway, Norwood 128, Mass.

For more details circle NED-492 K3 on enclosed inquiry slip

New 3M Product

Provides Gasket-like Seal for Metal Corners, Surfaces

Wherever solid slab corners need sealing . . . wherever faying surfaces require water-tight protection—you can use EC-1202, 3M's flexible new sealer.

Made of synthetic rubber ribbon, EC-1202 is reinforced with sturdy fabric for strength, which helps it hold its dimensions . . . makes it easy to apply.

Available in widths ranging from ¼" to 2", in ¼" increments, EC-1202 is offered in 100' rolls, 1/16" thick . . . in 200' rolls, 1/32" thick. Why not consider it for your sealing needs?

For more complete details, write to 3M, Dept. 810, 411 Piquette Avenue, Detroit 2, Michigan.

3M COMPANY

MINNESOTA MINING AND MANUFACTURING COMPANY
ADHESIVES AND COATINGS DIVISION

see our catalog in PRODUCT DESIGN FILE or write for copy

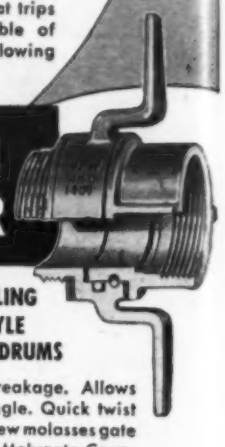
For more details circle NED-493 K3 on enclosed inquiry slip

OPW AUTOMATIC BARREL FILLER

QUICK FILL . . . NO OVERFLOW

Complete automatic shut-off at any point of adjustment. Controlled fill level. Liquid actuates float that trips automatic mechanism. Capable of handling light or heavy flowing liquid even to gas tar.

OPW MOLYGATE DRUM COUPLER



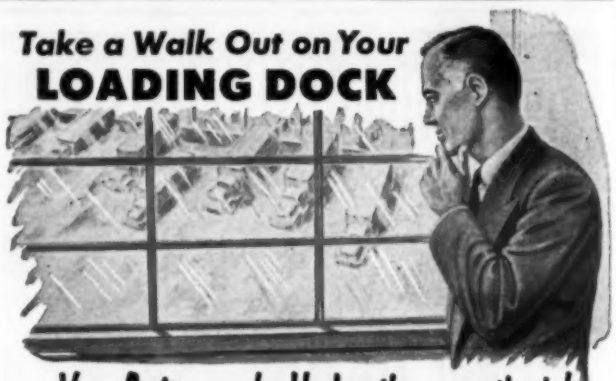
FOR QUICK COUPLING OF MOLASSES STYLE GATE VALVES TO DRUMS

Saves time and breakage. Allows discharge at any angle. Quick twist disconnects. Just screw molasses gate valve or faucet into Molygate Coupler. Eliminates wrenching, pounding and stripped threads.

OPW CORPORATION
2735 Colerain Ave. Cincinnati 25, Ohio

For more details circle NED-494 K3 on enclosed inquiry slip

Take a Walk Out on Your LOADING DOCK



... Your Costs may be Higher than you think!

Your loading dock is a control valve to costs . . . an indispensable gateway to profitable operations! Gear it for smooth, rapid transit between plant and freight carrier by equipping your docks with Magliner magnesium dock boards. Easily handled by one man, Magliner dock boards expedite the flow of materials in and out of loading areas . . . keep shipments moving! They can add substantially to greater loading capacity . . . *without adding to capital expenditure!*

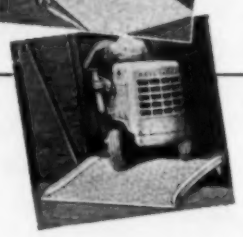
Designed to exact specifications, Magliner dock boards are custom engineered to overcome any normal or unusual loading problems, regardless of location complexities, area size, load to be handled, or equipment used! Of all-magnesium, bridge-design construction, these low cost, high output units combine the amazing lightness . . . the amazing strength of the world's lightest structural metal! They are capacity rated to handle the heaviest load requirements. Get greater returns on your handling dollar! Get the complete story on low-cost Magliners for *your* docks. Write for information bulletin DB-204R.

magnesium LIGHT

Easily handled by one man! No work-stopping interruptions! Reduces lifting hazards.

magnesium STRONG

Bridge-design construction. Capacity-rated to handle the heaviest load requirements.

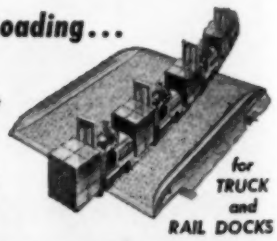


magnesium SAFE

Damage-proof safety curbs prevent truck roll-offs . . . eliminate tire damage and curb damage! Positive lock prevents shifting. Assured safety to men and equipment!

For Faster, Lower-Cost Loading...

MagLiner MAGNESIUM DOCK BOARDS



for TRUCK and RAIL DOCKS

Write for Descriptive Bulletin DB-204R

MAGLINE INC., P. O. BOX 392 • PINCONNING, MICHIGAN

For more details circle NED-495 K3 on enclosed inquiry slip

If the equipment you design calls for 29.9" of vacuum or 25 psi pressure

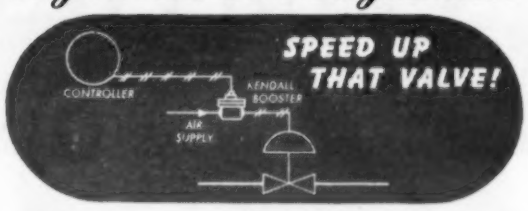
Wings in this Leiman Pump take up their own wear, year after year, and always maintain contact with cylinder wall. *See our Listing in Sweet's Product Design File*

Write for 16-page catalog and blueprints of typical applications on Leiman rotary positive pumps—choice of industry since 1889.

LEIMAN BROS., INC.
167 Christie Street, Newark 5, N. J.

▲ For more details circle **NED-496 K3** on enclosed inquiry slip ▲

Engineered Air Regulation



We say—**It's easy and inexpensive to minimize valve response lag in even the biggest diaphragm motor or cylinder type actuator when a KENDALL Booster triggers the action.**

Prove our statement by testing this air volume amplifier on your most sluggish valve.

Write for Bulletin 4522 describing the Kendall Model 20 Precision Air Volume Booster with its

- **High capacity—both supply and relief**
- **Perfect balance against supply pressure changes**
- **Precise ratios**

Ratio No.	Loading Pressure	Output Pressure
1	Each 1 PSI	produces 1 PSI
1/2	" 1 "	" 1/2 "
1/3	" 1 "	" 1/3 "
2	" 1 "	" 2 "
3	" 1 "	" 3 "

KENDALL CONTROLS CORPORATION
144 MOODY STREET WALTHAM 54, MASS.

▲ For more details circle **NED-497 K3** on enclosed inquiry slip ▲

IMPROVED TURNBUCKLES

have

NEW EYE DESIGN

HEX ENDS

Laughlin's exclusive pear shaped turnbuckle eyes were designed to eliminate need for special shapes. It's the only eye that will take the ear of a shackle one size smaller than the turnbuckle. The shape makes it stronger than a round eye. It looks better and works better. The next time you need turnbuckles order Laughlin and see for yourself.

All Laughlin turnbuckles have hexagon ends and rugged reins. Easily adjusted with a wrench. Wheelabrated finish dipped in a rust preventive or hot dip galvanized.

The Full Line of Wire Rope & Chain Fittings

LAUGHLIN

THE THOMAS LAUGHLIN CO.
1019 Fore St., Portland, Me.

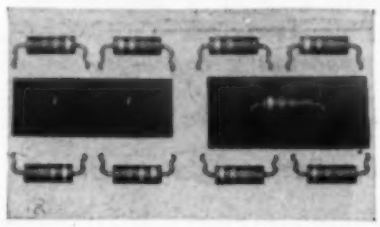
▲ For more details circle **NED-498 K3** on enclosed inquiry slip ▲

MAGNET TRUCK
handles castings or scrap metal

Lifting magnet supported on a gooseneck boom enables this Yale gasoline truck to handle castings, cast iron or steel borings and steel turnings. Truck mounts a 36-v model Z-36 Ready-Power unit which supplies current to energize the magnet. Controls are within easy reach of the operator. Magnet can be hung in any one of four different positions on the boom. Hook capacity varies from 4700 lb at 36-in. outreach to 3000 lb at 72-in. reach. Made by **Yale & Towne Mfg. Co.,** Yale Materials Handling Div., Dept. M-1, Roosevelt Blvd. & Haldeman Ave., Philadelphia 15, Pa.

▲ For more details circle **NED-499 K3** on enclosed inquiry slip ▲

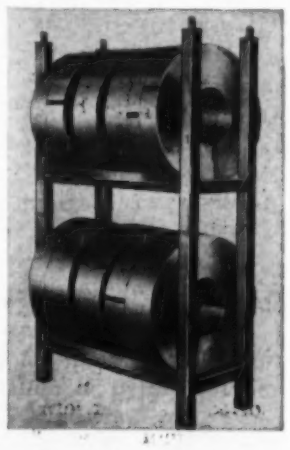
RESISTORS
leads trimmed for printed wiring



Formed and trimmed leads on standard ½-w fixed composition resistors facilitate handling when assembling components on standard 0.062-in. printed wiring base. The hot tin dipped leads are cut and formed for a tight spring fit and extend through circuit base just far enough for easy soldering. Resistors snap into place. No additional operations are needed for proper assembly. Made by **Stackpole Carbon Co.,** Electronic Components Div., Dept. NED, St. Marys, Pa.

▲ For more details circle **NED-500 K3** on enclosed inquiry slip ▲

COIL STOCK RACKS
can be used singly or in tiers



All sizes of wire and strip coil can be handled and stored in these coil stock racks which can be ordered in any practical dimensions. Although made in single units, the heavy duty racks can be stacked to ceiling heights. Welded reinforced tubular construction makes high tiering possible. Racks can be handled by crane or truck. Crane eyes and cross bars are optional. Made by **Rack Engineering Co.,** Dept. R-NED, Connellsville, Pa.

▲ For more details circle **NED-501 K3** on enclosed inquiry slip ▲

Silent Dependability

AHLBERG ED and EDR SERIES
PILLOW BLOCKS

Here are superb, high speed power-transmission bearings specifically designed for air conditioners, fans and blowers . . . precision constructed for silence, smoothness and years of hard service. Competitively priced, yet packed with heavy-duty features. Write for catalog today.

AHLBERG BEARING COMPANY
3025 W. 47th Street
Chicago 32, Ill.

AHLBERG PRECISIONEERED
Anti-Friction Products Since 1908

▲ For more details circle **NED-502 K3** on enclosed inquiry slip ▲

Lightweight **HELIARC TORCH**

is water-cooled...

FOR EFFICIENT INERT GAS WELDING AT LOW COST

You can make high quality welds every time with this lightweight, 300 amp. HELIARC HW-10 torch. Both the torch body and power cable have all-internal water-cooling for cooler operation even when welding continuously at full capacity. Yet cleaning is easy for all water passages are straight. Electrode adjustment is quick and simple, too. No wrenches needed. And electrode stub loss is minimized by an improved water-cooling system. Call your nearest LINDE representative today for more details on the HELIARC HW-10 torch.

LINDE AIR PRODUCTS COMPANY
A DIVISION OF UNION CARBIDE AND CARBON CORPORATION
30 East 42nd Street UCC New York 17, N. Y.
Offices in Other Principal Cities
In Canada: DOMINION OXYGEN COMPANY, LIMITED, Toronto

The terms "Heliarc" and "Linde" are registered trade-marks of Union Carbide and Carbon Corporation.

▲ For more details circle **NED-503 K3** on enclosed inquiry slip ▲

Cycle-Seasoning

gives added dependability to WESTON

***all-metal* THERMOMETERS**

To INSURE accurate functioning over long periods, a bi-metal sensing element must necessarily be aged. But there's a big difference in the aging methods employed! Each element in a WESTON Thermometer is first WESTON made . . . then placed in a chamber and subjected to *broad range cycle seasoning* for prolonged periods. When finally placed in a thermometer it is *fit* and *ready* to give the precise measurements . . . the long-term dependability . . . so typical of all instruments bearing the WESTON name. WESTON Thermometers are available in all types, sizes, ranges and stem lengths for all industrial applications. Literature available . . . WESTON Electrical Instrument Corporation, 614 Frelinghuysen Avenue, Newark 5, New Jersey.

Thermometers with the MULTIPLE HELIX

Stocked by leading Distributors

WESTON
Thermometers

▲ For more details circle **NED-504 K3** on enclosed inquiry slip ▲

THROUGH MILLIONS OF CYCLES
WITH STAR-KIMBLE BRAKEMOTORS

Stopping of a Star-Kimble Brakemotor is split-second in action, precisely timed by simple adjustments. Quiet, too — no lining screech. **Starting** is smooth and free from drag — small air gap assures quick brake release. Brake and motor are *designed* together to work together as a single compact unit. Write for Bulletin B-501-A.

Standard and special motors of all types, 1 to 600 hp; Marine motors ½ to 600 hp; generators and motor-generator sets, 1 to 500 kw.

STAR-KIMBLE
MOTOR DIVISION OF
Miehle Printing Press and Mfg. Co.
214 Bloomfield Avenue Bloomfield, N. J.

▲ For more details circle **NED-505 K3** on enclosed inquiry slip ▲

Can you afford to be without corrosion-resistant thermometers?

Production errors caused by thermometer failures can be mighty costly.

The corrosion-resistant, pressure-tight construction of Rochester dial thermometers saves you this sort of expensive trouble. And it practically doubles the life of the thermometer under severe operating conditions.

An exclusive stainless steel welding process bonds case, stem and nut into a single corrosion-resistant unit.

RECALIBRATE ON THE JOB

● Rochester dial thermometers are built to stay accurate under rough treatment. But if an unusually hard blow knocks the pointer out of adjustment, you can recalibrate it quickly and easily by turning a single screw.

You can order money-saving Rochester thermometers from one of our specialized instrument representatives, listed in Sweet's Catalog or the yellow pages of your telephone directory. Or write us direct for further details. ROCHESTER Manufacturing Company, Inc., 114 Rockwood Street, Rochester 10, New York.

MILLIONS of Rochester Dial Thermometers are now delivering dependable service

Rochester
MANUFACTURING COMPANY, INC.
DIAL THERMOMETERS GAUGES AMMETERS

▲ For more details circle **NED-506 K3** on enclosed inquiry slip ▲

MERRILL MATERIALS HANDLING DEVICES

3-M-2

MERRILL BROTHERS
56-13 ARNOLD AVENUE MASPETH, N. Y.

▲ For more details circle **NED-507 K3** on enclosed inquiry slip ▲

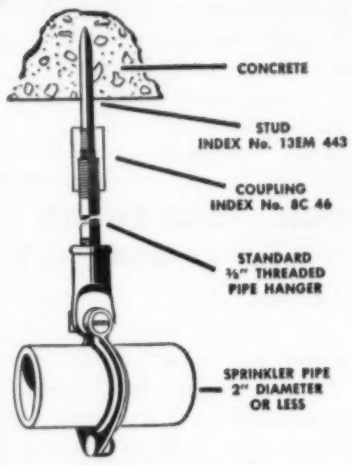
DRAW FURNACE
temperature range is 350 to 1350° F

This automatic recirculating air draw furnace has an available temperature range from 350 to 1350° F. It is made in two standard models with ratings of 230 or 440 v, single or three phase, and with inside dimensions of either 12 x 24 x 12 in. or 15 x 24 x 18 in. On both models the door rises vertically with a worm-gear-rack combination and is self-locking at any position between fully closed and fully open. The air circulation, which automatically stops when the door is opened to prevent burning the operator, is caused by a rear-wall mounted impeller. Other features include a power saving switch which automatically regulates power input in proportion to operating temperatures, also shelf design which shields work from radiant heat. Made by **Blue M Electric Co.**, 307 W. 69th St., Chicago 21N, Ill.

▲ For more details circle **NED-508 K3** on enclosed inquiry slip ▲

PIPE SUSPENSION STUDS
used with powder actuated driver

Underwriters' Laboratories approved for hanging sprinkler pipe up to and including 2 in. diameter, Index 5ES 343(3) and 13EM 443 studs are made for use with powder actuated model 450 Remington stud driver. Former is designed for pipe suspension from steel, while latter is for anchoring hangers in concrete. A ¼ to ⅜-in. coupling, Index 8C 46 and also UL-approved, is available for connecting standard ⅜-in. threaded pipe hangers to the studs. Made by **Remington Arms Co.**, 939 Barnum Ave., Bridgeport 2, Conn.



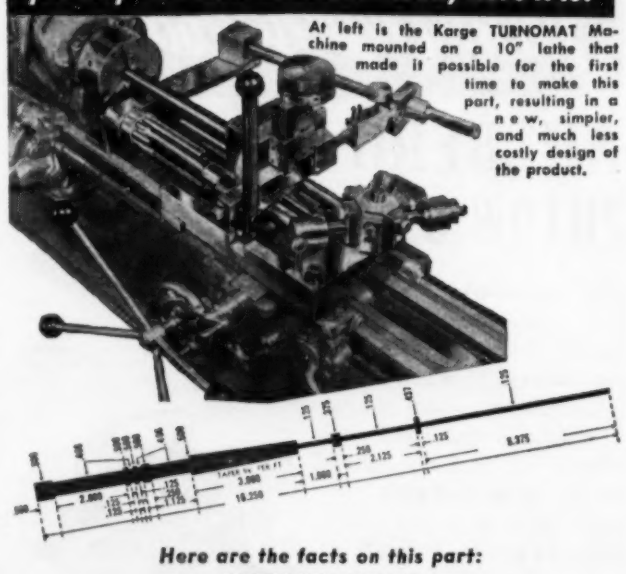
▲ For more details circle **NED-509 K3** on enclosed inquiry slip ▲

Gas-Fired Crucible Furnaces

Eclipse Fuel Engineering Co.—Gas-fired crucible furnaces for melting nonferrous metals are described and illustrated in bulletin C-2, together with accessories and burners. Catalog presents a complete line of more than 25 units, and gives constructional and other information, including specifications.

▲ For more details circle **NED-510 K3** on enclosed inquiry slip ▲

you say "It's IMPOSSIBLE"...well, here it is!



At left is the Karge TURNOMAT Machine mounted on a 10" lathe that made it possible for the first time to make this part, resulting in a new, simpler, and much less costly design of the product.

Here are the facts on this part:

INSTRUMENT SPINDLE

Material — Stainless steel	Number of pieces — 2500
Finish — 16 micro inches	Time — 11 minutes each
Diameter tolerances ±.001	Set-up time — 15 minutes, total
Number of Diameters — 14	Tooling cost — $11.25

Make us prove we can solve your problem, at real savings for you. Mail us your sample or blueprints; our engineers are eager to advise, recommend and quote you on the correct TURNOMAT equipment and tooling to give you increased production at lower cost. It costs you nothing to get the TURNOMAT facts—may save you thousands of dollars as it has other leading industries. Write today, Dept. NE.

U. S. Patent No. 2,464,813. Other U. S. and foreign patents Pending.

TURNOMAT COMPANY, INC. Brockport, New York

▲ For more details circle **NED-511 K3** on enclosed inquiry slip ▲

Tough Areas call for TUFF-TEX* floors!

Tuff-Tex Greaseproof Industrial Tile completely answers the requirements of heavy-duty flooring. It's especially recommended for machine areas.

Tuff-Tex combines impact resistance with flexural strength. Metal chips, or constant rolling friction, can't hurt it. Tuff-Tex offers a wide range of rich colors and versatility of design ...both decorative and functional.

Send today for folder, "Tuff-Tex Greaseproof Industrial Flooring"... or see your Tile-Tex* Contractor, listed in classified pages of phone book. Ask him about FLEXACHROME*, too.

THE TILE-TEX DIVISION, The Flintkote Company, 1234 McKinley Street, Chicago Heights, Illinois

Tile-Tex—Pioneer Division, The Flintkote Company, P. O. Box 2218 Terminal Annex, Los Angeles 54, Calif.

The Flintkote Company of Canada, Ltd., 30th Street, Long Branch, Toronto, Canada

*Registered Trademark, The Flintkote Company

TUFF-TEX GREASEPROOF INDUSTRIAL TILE

▲ For more details circle **NED-512 K3** on enclosed inquiry slip ▲

RUEMELIN
Blast Cleaning
CABINETS

RUEMELIN Blast Cabinets are practical for a great variety of cleaning operations. They are extensively used to remove heat-treating scale and to clean sub-assemblies in metalworking shops, foundries, aircraft factories, etc. Built in many sizes. Furnished complete with dust control equipment. Write for Bulletin 32-B.

RUEMELIN MANUFACTURING CO.
3883 N. PALMER ST. • MILWAUKEE 12, WIS., U. S. A.
Manufacturers and Engineers SAND BLAST AND DUST COLLECTING EQUIPMENT, WELDING FUME COLLECTORS

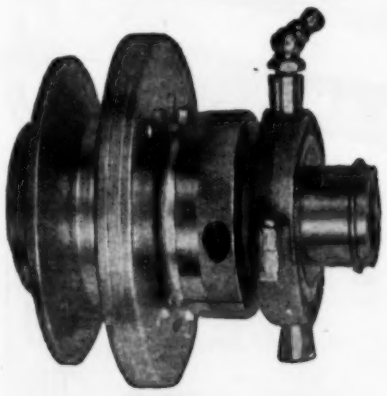
A 5135-1/9AR3

▲ For more details circle **NED-513 K3** on enclosed inquiry slip ▲

NEW DISC CLUTCH

for gasoline engines, electric motors, speed reducers, etc.

operates with light pressure
picks up load without grab



integral V-belt pulley

integral sprocket

cut-off coupling or sleeve

easy manual operation

adjustable

powerful

For stub or through shaft application, these new Type K clutches—rated up to .8 HP at 100 rpm—have generous safety factors throughout to stand severest service. Threaded steel adjuster permits precise easy adjustments to assure maximum capacity and minimum engaging pressure. Clutch locks itself in engaged position.

Write for new descriptive Bulletin K-1, including complete specifications.

THE EDGEMONT MACHINE CO.
2200 HOME AVENUE • DAYTON 1, OHIO

▲ For more details circle **NED-514 K3** on enclosed inquiry slip ▲

Power to sink holes deep in tough woods—Plus power to *back out!*

Ideal for heavy, wet or sappy timbers

$49.95

Drill inch-diameter holes *deep* in woods where bits usually stick tight—creosote planking, sappy or wet timbers. Then—a flick of the reverse switch and Cummins 202 spins *itself* out! Ends straining and hand turning to remove bits. Ends costly delays! Double-coil, dynamically balanced motor provides big reserve of power for full-speed drilling up to ½-inch in steel, 1 inch in wood. Really bargain-priced for its quality!

Cummins

CUMMINS-CHICAGO CORP.
4740 N. Ravenswood Avenue, Chicago 40, Illinois
334 Lauder Avenue, Toronto 10, Canada

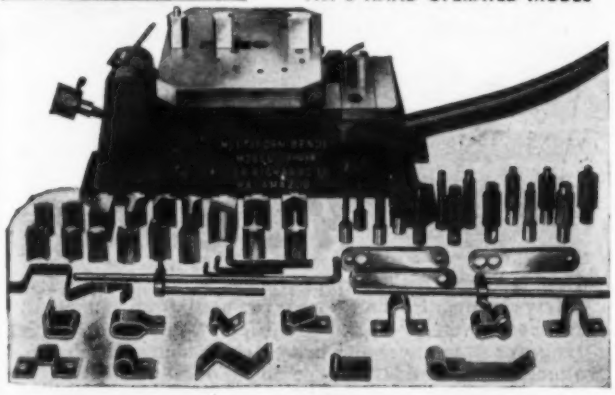
▲ For more details circle NED-515 K3 on enclosed inquiry slip ▲

THE FAMOUS MULTIFORM BENDER CUTTER

Produces Without Special Tooling—Saves Die Costs Saves on Expensive Presses

This efficient machine is useful in all lines of trade, spring plants, radio and electrical equipment manufacturers. Complete with tooling, for bending material up to ⅛" x 1½".

No. 5 HAND OPERATED MODEL



AIR OPERATED MODELS AVAILABLE IN THIS AND LARGER SIZES

FIVE-IN-ONE-TOOL—ALSO LARGER MODELS
IT BENDS FLAT AND ROUND STOCK INTO ANY SHAPE, CUTS AND PUNCHES FLAT STOCK

J. A. RICHARDS CO. MYRTLE & PITCHER STS. KALAMAZOO, MICHIGAN

▲ For more details circle NED-516 K3 on enclosed inquiry slip ▲

Preventive MAINTENANCE

BEGINS WITH
BELTRACTION
THE *Liquid* BELT TREATMENT

CERTIFIED BY LEADING INDEPENDENT LABORATORIES AND MORE THAN 110,000 users.

Slipping belts not only slow up production but also cause chattering and misalignment of work, wearing out machines long before their time. BELTRACTION by preventing belt slippage protects against costly delays and breakdowns. Use it regularly—every time you lubricate bearings—and keep equipment operating at top efficiency. Write for the new interesting folder "Horse Power Where and When You Need It" which gives results of tests by independent laboratories.

Also Prolongs Belt Life
BELTRACTION weatherproofs, oilproofs and waterproofs all kinds of belts—works foreign substances off of belts and keeps them clean—minimizes belt replacements.

BELTRACTION COMPANY
1817 W. Winona St. Chicago 40, Ill.

FOR ALL TYPES OF BELTS • V-TYPE, FLAT OR ROUND

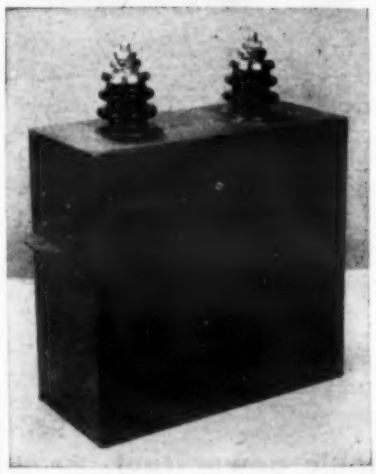
▲ For more details circle NED-517 K3 on enclosed inquiry slip ▲

PNEUMATIC IMPACT WRENCHES
three models meet most needs

Capacity, power and size to meet individual needs are offered by three pneumatic impact wrench models. Tools will tighten or remove bolts and nuts, remove broken cap screws and studs, will do tapping and are practical for reaming and for driving and removing of lag screws and screw spikes. Model PW-5014S, the "Squatty" takes ⅞-in. bolt or nut, has ¾-in. square drive and has free speed of 1600 rpm at 90 psi. Model PW-4012P takes ¾-in. bolt, has ¾-in. square and speed of 1300 rpm at 90 psi, while model PW-308P takes ½-in. bolt, has ½-in. square drive with free speed of 1400 rpm at 90 psi. All three models have five vane rotary type air motor, built-in automatic oiler and pin lock. Made by **Mall Tool Co.**, 7725 S. Chicago Ave., Chicago 19, Ill.

▲ For more details circle NED-518 K3 on enclosed inquiry slip ▲

CAPACITOR
for indoor or outdoor usage



Supplied in three-phase indoor and single and three-phase outdoor styles, this capacitor is rated at 15-kvar for 230-v service. It is especially suited for outdoor use on secondary circuits and on secondary networks where it delivers 13.3 kvar at 216 v. Where multiples of 15 kvar are needed for outdoor use on pole mountings, it can be mounted in standard one, two and four-unit brackets. It is also available for indoor use in dust-tight and rack-type equipment. Made by **Westinghouse Electric Corp.**, P. O. Box 2099, Pittsburgh 30, Pa.

▲ For more details circle NED-519 K3 on enclosed inquiry slip ▲

Open Gear & Cable Lubricant

E. F. Houghton & Co.—Free-flowing, fast setting, highly adhesive lubricant for open gears and cables, named Tenac, is described in 4-page bulletin. Application is by spray, brush or swab. Range of applications is outlined for various grades available.

▲ For more details circle NED-520 K3 on enclosed inquiry slip ▲

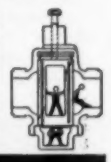
THESE VALVES . . . HAVE CURED A LOT OF MAINTENANCE HEADACHES because they AUTOMATICALLY ADJUST FOR WEAR

Wear, that in most valves would cause leakage and necessitate complete valve renewals, simply doesn't faze a HOMESTEAD-REISER. Its two-piece, wedge-acting plug constantly and automatically adjusts itself to make up for wear as wear occurs. The valve acts on its own. It is SELF-SEALD! Result: Extra long, leakless service life . . . more operations between lubrications . . . less maintenance . . . lower plant operating costs. Available in semi-steel or cast steel; 100% port area or Venturi type; sizes ½" to 14" for steam working pressures to 150 lbs.; or oil . . . water . . . gas to 200 lbs.

Complete data and prices sent on request. Write today for VALVE REFERENCE BOOK No. 39. No obligation.

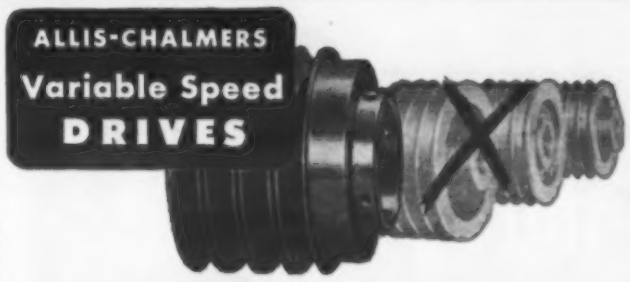
HOMESTEAD
VALVE MANUFACTURING COMPANY
"Serving Since 1892"
P. O. Box 84 Coraopolis, Pa.

HOMESTEAD-REISERS SEAL THEMSELVES
The wedge-action of the two-piece plug under line pressure, presses the plug outward against the body, keeping plug and body surfaces in contact at all times. This automatic adjustment for wear assures extra long life and maximum leakless service.



HOMESTEAD-REISER
Self-Seald . . . Lubricated
PLUG VALVES

▲ For more details circle NED-521 K3 on enclosed inquiry slip ▲



LET ONE SHEAVE DO THE JOB OF 2 or 3!

WHY DISMANTLE DRIVES AND CHANGE SHEAVES every time you want to change speeds? Get the speed you need with one *Vari-Pitch* sheave. It has a number of important advantages:

- Provides infinite number of speeds.
- Speed will not change once it is set.
- Costs less than other methods of speed changing.

Allis-Chalmers offers all the equipment and engineering needed for the complete *Texrope* drive, including sheaves, belts, motors, starters, and motor bases—all from one reliable source, backed by nation-wide service.

Call your nearby Allis-Chalmers district office or distributor, or write Allis-Chalmers, Milwaukee 1, Wisconsin. A-4116

Texrope and Vari-Pitch are Allis-Chalmers trademarks.

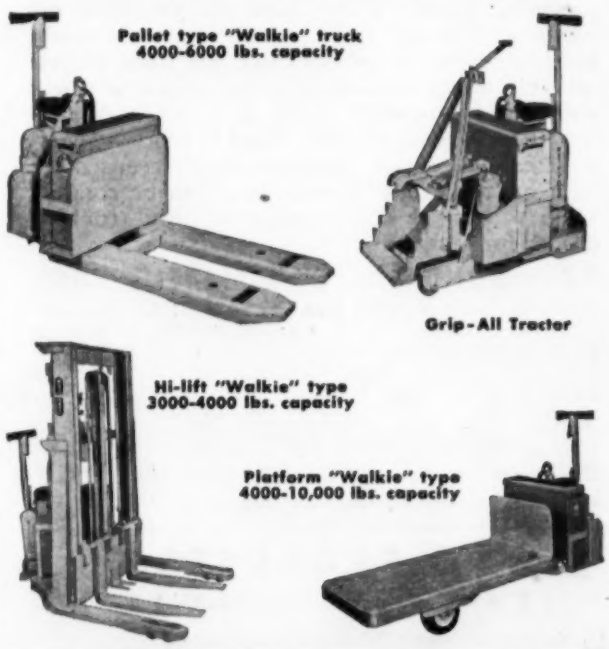
ALLIS-CHALMERS

▲ For more details circle NED-522 K3 on enclosed inquiry slip ▲

MOTO-TRUC *Service-Ability*

GOOD truck maintenance begins right in your own *plant*. The quick service features of MOTO-TRUC mean less down time . . . Less cost to you for repairs.

Get the complete facts on the truck that offers the utmost in trouble-free operation . . . and remember . . . THERE'S A MOTO-TRUC FOR EVERY PURPOSE. Send for Bulletin No. 53.



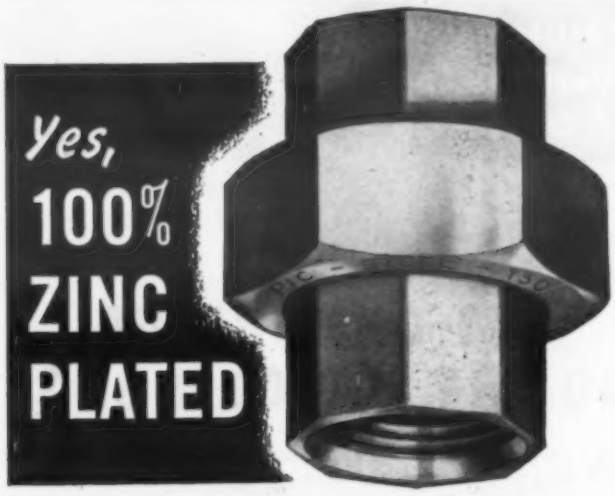
Representatives in Principal Cities

The MOTO-TRUC Co.

1961 E. 59th STREET • CLEVELAND 3, OHIO

PALLET . . . PLATFORM . . . HI-LIFT TRUCKS
LARGEST EXCLUSIVE MANUFACTURERS OF "WALKIES"

▲ For more details circle NED-523 K3 on enclosed inquiry slip ▲



PIC STEEL UNIONS*

Rust can't get a foothold on these bright, cheerful-looking unions that blend so well with original equipment. Even the threads are zinc plated. Pics install speedily with open end wrenches — ends are uniformly flat-sided, uniformly parallel. They're strong too — of heavy steel pipe coupling stock. Special wedge type bronze seat for tight security. Pics are a "buy" price-wise also — they cost *less* than a galvanized, no more than a black malleable union.

*For 150 # Service — Write for FREE Samples

DART UNION COMPANY
132 THURBERS AVENUE, PROVIDENCE 5, R. I.

▲ For more details circle NED-524 K3 on enclosed inquiry slip ▲

HARD-HITTING! RUGGED! COMPACT!

"Super Slugger"

The Electric Hammer With The Neoprene "Cushion-Snap"—

NO KICK!

7½ LBS.
LIGHT-WEIGHT
HEAVY-DUTY

NEW TYPE HAMMER
Delivers "Terrific Wallop"!

CHECK THESE ADVANTAGES—

New method of impact motion ✔ Hard hitting, powerful blow ✔ No kick on armature or operator ✔ Rugged, finest materials ✔ Dependable performance ✔ Compact, fits tight places ✔ Light weight — one hand operation ✔ Portable-plug in anywhere (A.C. or D.C.) ✔ Adaptable — with tools for every kind of work ✔ Easy maintenance, simple lubrication ✔ Keeps cool with built-in fan ✔ Power head can be rotated 180° ✔ Low in cost — can save time, trouble, money for you!

DOES HUNDREDS OF DIFFERENT JOBS

Drills Concrete • Drills Masonry • Cuts Sheet Metal • Chips or Channels Concrete or Metal • Cleans Mortar Joints • Scales Rust • Strips Old Flooring • Caulks Soil Pipe • Cleans and Peens Welded Joints

Write FOR CATALOG
On "Super Slugger" and Line of Tools
Manufactured by Noble & Stanton, Inc., Bedford, Ohio

TEMPO PRODUCTS CO.
2075 E. 65th ST. • CLEVELAND 3, OHIO

☐ Please Send Catalog, Prices and Complete Data
☐ Please Arrange Demonstration of Super Slugger

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ STATE _____ B

Dealers—Write for Information

▲ For more details circle NED-525 K3 on enclosed inquiry slip ▲

TWO-WAY RADIO
for materials handling vehicles

Designed for application to materials handling vehicles, this two-way radio set is small and light in weight. It is usable in the low power industrial licensing classification established by the Federal Communications Commission. Measurements are 20 x 8 x 7 in. and weight is 20 lb. Unit is weather resistant and of one-piece construction, although an external mounting can be used. FCC regulations dictate that use must be within the user's plant grounds. Made by **General Electric Co.,** Electronics Park, Syracuse, N. Y.

▲ For more details circle NED-526 K3 on enclosed inquiry slip ▲

HEATER UNITS
vertical delivery, steam or water

Operating with steam and hot water, line of vertical delivery unit heaters combines light weight and easy mounting features. The largest model has a capacity of 600,500 Btu/hr and weighs 284 lb. Units feature circular casings and coils, and have outlet air temperatures in the 110-120° F range for comfort and fuel economy. Twenty-six different models are available, including 13 for normal steam pressures and 13 with lower outlet temperatures for higher pressure steam. A choice of five different types of air deflectors is also available. Made by **Modine Mfg. Co.,** 1702 Racine St., Racine, Wis.

▲ For more details circle NED-527 K3 on enclosed inquiry slip ▲

BUFFING TOOL
fits into portable power tool

Powered by any portable electric or pneumatic tool, this Magic Buffer will produce a rough or matte surface on iron, steel, fabric, leather, wood, concrete and other materials. It will also remove rust and prepare surfaces for application of protective coatings. Tool was originally developed to roughen conveyor belts preparatory to application of repair surfaces. Made by **Magic Chemical Co.,** Dept. N-137, 121 Crescent St., Brockton 2, Mass.

▲ For more details circle NED-528 K3 on enclosed inquiry slip ▲

TOUGHNESS that's Easy to Handle

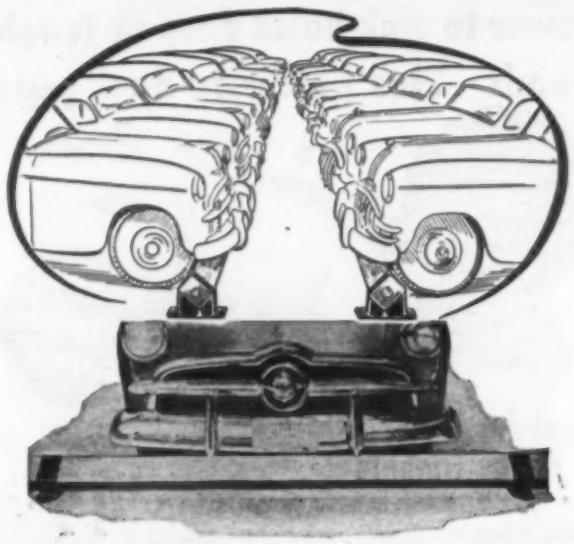
Quaker
INDUSTRIAL HOSE

Toughness! Combined with flexibility and light weight! Whatever the job, whatever the liquid, gas or substance—Quaker has a hose that's exactly right for it! Always as light in weight as working conditions will permit, always easy to handle and no trouble to use! Engineered to withstand any "punishment" it's called on to take, Quaker hose resists high pressures, twisting, bending, deteriorating liquids and abrasion. For long wear, low upkeep, top value—insist on Quaker!

Write for name of nearest distributor

QUAKER RUBBER CORPORATION
DIVISION OF H. K. PORTER COMPANY, INC.
OF PITTSBURGH
Dept. D, Philadelphia 24, Pa.
Branches in Principal Cities

▲ For more details circle NED-529 K3 on enclosed inquiry slip ▲



SALIENT FEATURES OF HAR-BAR BARRIERS

1. High enough to stop your car.
2. Low enough to clear your bumper guards.
3. Barrier is above ground — no drainage problem.
4. Barrier is above ground — no rotting of wood.
5. Automatically spaces your cars.
6. Follows contour of your ground.
7. Easily installed — just line up and drive the anchor pins.
8. Easily moved — just pull the anchor pins.
9. Easy to clean under.
10. Easy to maintain.
11. Installed on any kind of surface — black top, cement, macadam, gravel or cinders.
12. It really dresses up your parking lot.
13. You always stop against your tire — no shock.
14. Castings are non-rusting aluminum alloy.

Send us a plot plan of your parking lot—we do the engineering free.

HARRIS-BARRIER INC. 5407 N. PENNSYLVANIA STREET INDIANAPOLIS 5 - INDIANA

▲ For more details circle NED-530 K3 on enclosed inquiry slip ▲

EVERY SAFETY ENGINEER WILL WANT A COPY OF THIS BOOK

Here is a book that describes Wheeler's complete line of safety clothing. No matter what you need, from helmets to shoe covers, Wheeler can supply you. Complete ranges of sizes, styles and materials including asbestos, aluminized asbestos, flame-proofed duck, jean cloth, leather, fiberglas, wool. Send for your FREE COPY today!

WHEELER PROTECTIVE APPAREL INC.
WHEELER 234 W. Huron St. Chicago 10, Illinois
"More Safety per Dollar"

▲ For more details circle NED-531 K3 on enclosed inquiry slip ▲

Control your Sequence Operations Automatically
this far better way

STALEY TIME CYCLE CONTROLLERS

Start and stop motors, open and close relays, valves, etc. automatically in any predetermined cycle of time interval. Adjustable cams operate dependable Staley Metallic Mercury Switches for fully enclosed make and break. Standard, interchangeable parts and accessories provide wide range of adaptability in varying from 1 to 110 circuits. Reliability and long life proved in hundreds of installations.

Example—A two-circuit Staley Time Cycle Controller, used in reversing current several times a minute in a plating bath, has been operating 24 hours a day, 7 days a week for the past 5 years.

If you do things automatically, send for our helpful Bulletin No. 405.

ELECTRIC SWITCH CORPORATION
1250 Ruddick Street, Columbus, Indiana

▲ For more details circle NED-532 K3 on enclosed inquiry slip ▲

Protects AIR TOOLS AND EQUIPMENT

against rust, scale and condensation in the air line ...provides constant lubrication

The Keller Lubricator-Filter operates automatically when air tools or equipment are in operation. Filter removes moisture as well as solids—easily cleaned by opening drain cock at bottom. Oil feeds from the lubricator through an upright wick—no flooding or waste when tools are not in use.

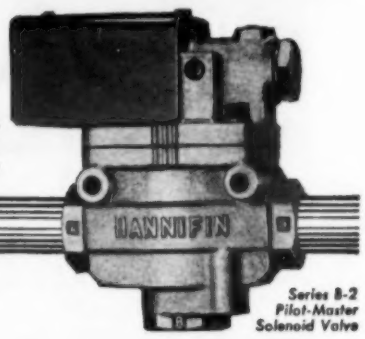
Transparent bowls show when filter needs draining, or when light spindle oil should be added to lubricator. Write for descriptive Bulletin #65-5.

Send for illustrated descriptive bulletin and detailed information

Keller Tool Company
GRAND HAVEN, MICHIGAN

For more details circle NED-533 K3 on enclosed inquiry slip

Once a "P-M" Pilot-Master Air Control Valve is put in a line...it is



Series B-2 Pilot-Master Solenoid Valve

never removed!

That's right: You use a pipe wrench only once...then never touch the piping again. To renew this valve you simply replace a cartridge that contains all the working parts. The valve body—a simple, sturdy housing—need never be removed from the line. Think of what this can mean to you in reduced down time and lower maintenance costs! Plan now to standardize on Hannifin Pilot-Master Valves.

- 2-way, 3-way and 4-way
- All sizes ¼" to 1¼"
- Pressures from 15 to 150 P.S.I.

WRITE FOR BULLETIN NO. 231

HANNIFIN

Hannifin Corporation, 1127 S. Kilbourn Ave., Chicago 24, Ill.
AIR AND HYDRAULIC CYLINDERS • PRESSES • AIR CONTROL VALVES

For more details circle NED-534 K3 on enclosed inquiry slip

USERS OF
CLUTCHES
OVER-RUNNING • BACKSTOP • INDEXING

GET THIS FOLDER FOR YOUR FILES!

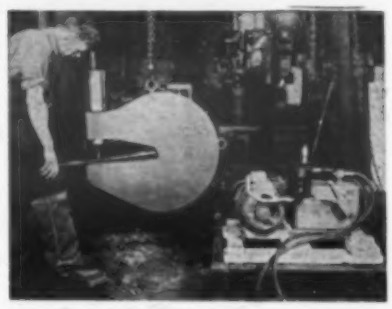
Explains why FORMSPRAG Clutches give greatest possible torque capacity for size and weight. Shows how the sprags grip at infinite number of positions—no backlash. Also contains basic engineering data.

FORMSPRAG COMPANY
23595 Hoover Road • Van Dyke, Michigan

FULL COMPLEMENT
FORMSPRAG Clutches
Distributors in principal cities

For more details circle NED-535 K3 on enclosed inquiry slip

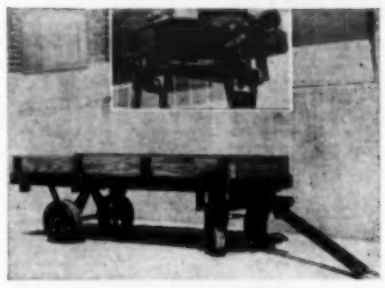
GUILLOTINE PUNCH
unit provides 75 tons thrust



Useful both for production work and for such other purposes as taking test slugs during rolling operations, this guillotine punch is powered by a 2-hp electric hydraulic pump unit giving a total of 75 tons thrust. It will punch a 1-in. hole through ¾-in. mild steel plate, and will accommodate from 13/16 to 1¾-in. punches. The unit can be boom-mounted to swing into its working position, and has a total weight of 1650 lb. If desired, it can be controlled by a mechanical type foot valve. Made by **Manco Mfg. Co.**, Washington St., Bradley, Ill.

For more details circle NED-536 K3 on enclosed inquiry slip

CASTER-STEER TRAILER
for high center of gravity loads



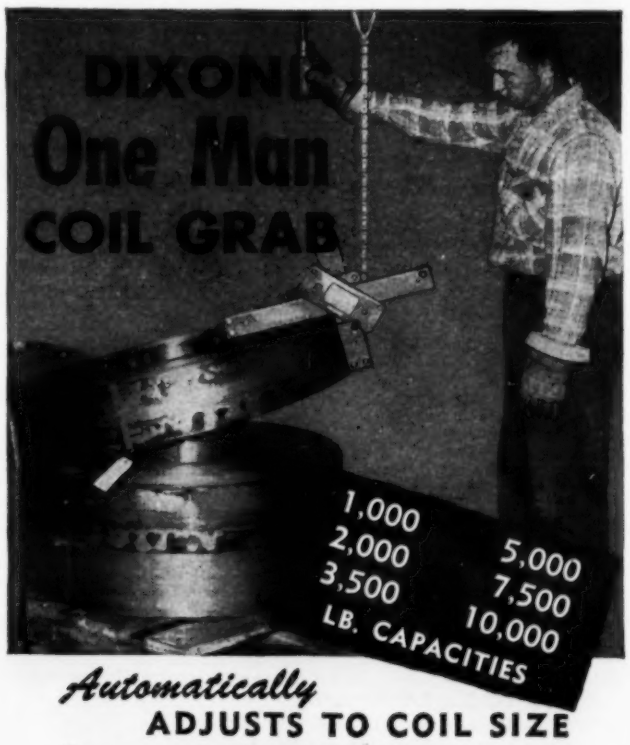
Controlled caster steering feature of this 8000-lb capacity trailer adapts it for high center of gravity loads because it minimizes tipping hazards. Long wheelbase and wide tire treads also contribute to stability. Steering is by a retractable tubular loop-handle connected by tie rod linkage between hitch and caster assembly. C-type rear couplers permit use in a trackless train system. Trailer is 24 in. high, 3 ft wide and 8 ft long. Variations in deck sizes and types of deck construction are optional as are side boards. Made by **Mercury Mfg. Co.**, 4038 S. Halsted St., Chicago 9, Ill.

For more details circle NED-537 K3 on enclosed inquiry slip

DRUM UPENDING DEVICE
enables one man to do the job

One man can upend a drum without danger of slipping or straining using the Lift-rite, a device developed specifically for handling drums. Lifting tension actually clinches the device securely to drum, avoiding slips and rolls. Convenient grip and multiplied lifting leverage are the one-man handling features. Made by **Weld-rite Co.**, Dept. 16, 6610 Pennsylvania Ave., Cleveland 3, O.

For more details circle NED-538 K3 on enclosed inquiry slip



Automatically ADJUSTS TO COIL SIZE

Seven standard models available to handle coils from 1" to 48" wide.

Export Dept.: 306 W. Washington Blvd., Chicago 6, Ill.

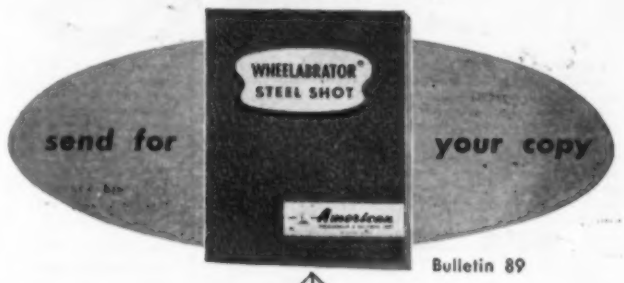
DIXON Automatic Tool, Inc.
2310 23rd Ave. • ROCKFORD, ILLINOIS

For more details circle NED-539 K3 on enclosed inquiry slip

WHEELABRATOR STEEL SHOT

the hard working shot for blast cleaning that works longer hours to lower cleaning costs per ton

this bulletin tells how



send for your copy

Bulletin 89

American WHEELABRATOR & EQUIPMENT CORP.
508 S. Byrkit St. Mishawaka, Indiana

For more details circle NED-540 K3 on enclosed inquiry slip

Send for this free booklet

How to run high-voltage power close to the load in dusty, dirty or lint-laden areas

Get all the electrical advantages of short secondary lines plus the maintenance advantages of dry-type transformers, even in areas where air-borne dust, dirt or lint is a problem.

The new, totally-enclosed, Westinghouse Type "E" Transformer makes it possible.

Write for Booklet B-5812; then check with your local contractor, Westinghouse distributor or application engineer. Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa. J-70705

YOU CAN BE SURE...IF IT'S Westinghouse

For more details circle NED-541 K3 on enclosed inquiry slip

Announcing!

. . . a new and better heavy duty welder and battery charger

THE Mid-States BULLDOG

For Production, Maintenance & Repair Work

The Mid-States BULLDOG is aptly named. It's that tough! The new BULLDOG is a heavy duty model, designed, engineered and built to meet all repair, production and maintenance work. You, like thousands of other users, will find this combination welder and battery charger delivers unvarying, trouble-free performance. No moving parts, transformer carries 5 year burn-out guarantee. Equipped with dual voltage charger capable of charging either 6 or 12 volt batteries. Automatic tapering charge serves as safeguard against battery damage by gradually reducing amperage rate as battery reaches full charge. Furnished complete with helmet, welder cables, battery cables.

Model 175-A.C. Arc Welder
Model 175-BC—Combination arc welder and battery charger. Shipped complete with accessories as illustrated. Size: 16" Wide, 13½" Deep, 20" High. Shipping Weight 136 pounds.

REA — Specifications — NEMA

Amp Range	Duty Cycle	Max. Open Cir. Volts	Primary Amps	Power Factor
15-175	50%	65	33	75%

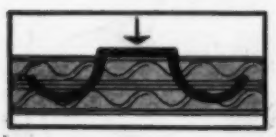
Send Today for Free Descriptive Literature

Mid-States WELDER MFG. CO.
6025 SOUTH ASHLAND AVENUE • CHICAGO 36, ILLINOIS

▲ For more details circle NED-542 K3 on enclosed inquiry slip ▲

LOOK! A SELF-CLINCHER!

No blade to insert!
Staple spreads itself under or inside the work!



Bostitch T5 Tacker → with outward clinch

Use it for stapling insulation around pipes and ducts . . . fastening shipping tags to corrugated containers . . . any job that calls for a blind clinch. By lightly pressing the handle you automatically drive a staple and turn its legs outward to clinch under or inside the work. Two models for light and medium staples. Call the Bostitch economy man in your area.

BOSTITCH
tastens it better AND FASTER with wire

For more information about the Bostitch T5 Tacker with outward clinch, write BOSTITCH, 690 Mechanic St., Westerly, R. I.

▲ For more details circle NED-543 K3 on enclosed inquiry slip ▲

FREE CATALOG!

available to you who are interested in the facts on open steel flooring.

Up to the minute information on the hows and whys of construction and installation of Tri-Lok Open Steel Flooring may now be at your finger-tips. Here is a four-page catalog designed to aid you in selecting the best types and styles of open-steel flooring for your particular construction project.

IN THIS CATALOG YOU'LL FIND
- Tables of Safe Loads
- Specifications required for open steel flooring installation
- Types of Tri-Lok Open Steel Flooring available
- Information concerning construction, sizes, strength and adaptability of Tri-Lok Open Steel Flooring

FOR YOUR COPY, WRITE FOR BULLETIN PW 1102

DRAVO CORPORATION
National Distributor for THE TRI-LOK CO.
Drave Building, Fifth and Liberty Avenues, Pittsburgh 22, Pa.

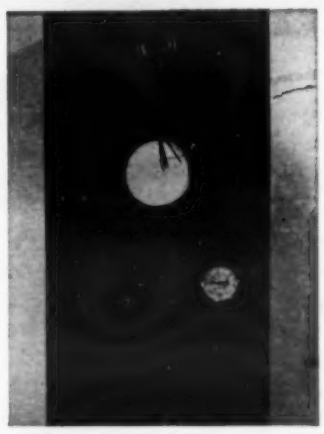
▲ For more details circle NED-544 K3 on enclosed inquiry slip ▲

OPERATIONAL RECORDER
for monitoring unattended operations

This compact operational recorder is designed for the multiple recording of process timing. Primary function is the monitoring of unattended equipment such as pumping stations, or other operations where an operating time analysis must be made. It traces a continuous record over a seven-day period, and indicates normal and above and below-normal factors. Each 24-hour record is a portion of a gradual inward spiral moving from the outer edge of the chart towards the center. Time discriminations are shown to five minutes. Other applications include time study analysis, production control, steel mill records and automatic recording of machine down time. Made by **Librascope, Inc.**, 1608 Flower St., Glendale, Calif.

▲ For more details circle NED-545 K3 on enclosed inquiry slip ▲

INDICATING FLOWMETER
for heat treating and melting uses



Designed to provide operators of heat treating furnaces with an instrument that will enable them to judge correctly the firing rate for any furnace load, this indicating flow meter assures consistently good output. Of the input calibrated flow or load saturation meter type, it is suitable for annealing, heat treating, normalizing and nonferrous melting operations. In its simplest form, it acts as an indicator only, but it can be had as a recorder or equipped with mercury switches to obtain any desired cycle. Two scales are used, one calibrated in cfm of gaseous fuel and other in percent Btu, latter being adapted to furnace or burners. Alarm circuits are also available. Developed by **Grindle Corp.**, Seico Instruments Div., 16233 Turner Ave., Markham, Ill.

▲ For more details circle NED-546 K3 on enclosed inquiry slip ▲

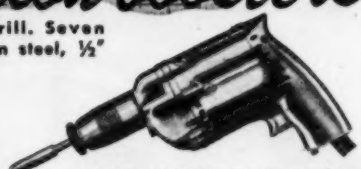
Power Supplies & Electronic Instruments

Beta Electric Corp.—Tabular listings of 120 standard designs of low, high and ultrahigh voltage power supplies in illustrated 32-page general catalog include all vital specifications and characteristics. Oscilloscopes, electronic rheostats and electronic micrometers are also covered.

▲ For more details circle NED-547 K3 on enclosed inquiry slip ▲

lightweight powerful Mall production boosters

Model 146 Electric Drill. Seven speeds. Capacity: ¼" in steel, ½" in wood. $46.00



Model 143S Electric Screwdriver. Capacity: ¼" hex bit—No. 10 flat, No. 12 round head screws. $65.00

Whatever your work requirement, you're sure to find the EXACT MALL TOOLS to BOOST PRODUCTION and DOWN COSTS. The extensive MALL line includes every type and size portable electric tool imaginable to meet all kinds of production and maintenance assignments. The name MALL on any tool you buy is your assurance of lasting dependability and top performance . . . they're built by experts for experts. Mail this coupon today.

40 Factory-Owned Service Warehouses, Coast-to-Coast, To Give You Fast, Dependable Service.

MALL TOOL COMPANY
7727 S. Chicago Ave., Chicago 19, Illinois
Send me all the facts about MALL
☐ Screwdrivers ☐ Drills
Name
Company
Address
MU-44

▲ For more details circle NED-548 K3 on enclosed inquiry slip ▲

Greater filtering capacity!

new Houdaille COOLANT

. . . for all water used or in individual machine tools or small central systems

New Multi-Tube Design Features:

16,000 SQ. INCH FILTERING AREA	Assures complete removal of chips, abrasives, dirt and other solid contaminants. Keeps coolant clean, safe for re-use indefinitely.
SELF-CLEANING FILTER TUBES	Self-cleaning filter tubes, washed free of contaminants during brief backwash interval, require no manual cleaning or maintenance . . . provide maximum filtering efficiency at all times.
ECONOMICAL OPERATION— NO PRECOATING OR FILTER AIDS	Practical design provides dependable trouble-free operation . . . eliminates need for precoating, filter aids, or expendable filtering media.

Compact, multiple filter-tube unit increases production, reduces downtime, extends tool and wheel life, allows better product finishes with fewer rejects. For complete details write . . .

WORLD'S LEADING OIL FILTER

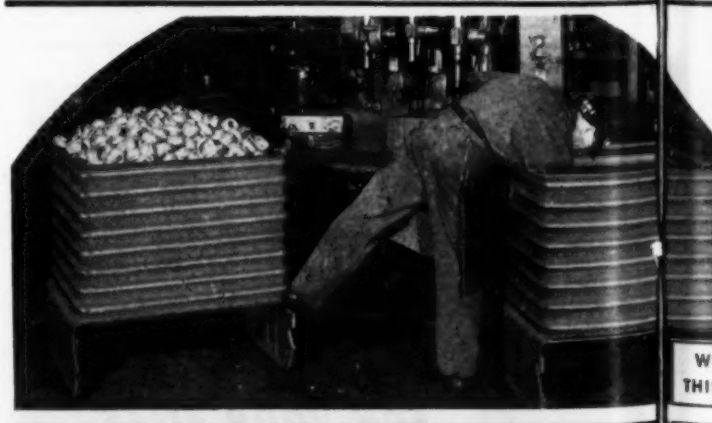
▲ For more details circle NED-549 K3

"This Bulletin May Hold the Answer to YOUR CONVEYING PROBLEMS"

MATHEWS CONVEYER
Engineering Offices or Sales Agencies in Principal American and Canadian Cities

General Offices, Mathews Conveyer Company . . . . . Ellwood City, Pa.
Pacific Coast Division, Mathews Conveyer Company West Coast . San Carlos
Canadian Division, Mathews Conveyer Company, Ltd. . . . . Port Hope

▲ For more details circle NED-550 K3



▲ For more details circle NED-551 K3

acity! • Lower operating cost!

oudaille "J" Type
OLANT CLARIFIER

ll water used or mineral oil coolants used
vidual machine tools
mall central systems

HONAN-CRANE CORPORATION
405 Wabash Ave., Lebanon, Indiana
a subsidiary of HOUDAILLE-HERSHEY CORP.

WORLD LEADING OIL FILTER MANUFACTURER

circle NED-550 K3 on enclosed inquiry slip ▲

he Answer
OBLEMS"

NVEYERS
American and Canadian Cities
Ellwood City, Pennsylvania
Coast . San Carlos, California
. . . West Hope, Ontario

• We could say . . . "Hot off the press! Come and get it." But, that's no way to present the solution to a conveying problem. We do say, however, that this bulletin, presenting the newest in Mathews General Purpose Belt Conveyers, could be just what you're looking for. It might help you solve a particular conveying problem. Write for it today.

circle NED-551 K3 on enclosed inquiry slip ▲

COMPARE
THESE METHODS

WHEREVER THIS GOES ON
CONVERT TO WORK-O-MATIC*

for big production gains!

The Work-O-Matic drop-bottom box and positioning stand are engineered as a team to avoid tiring, non-productive waste motion. See for yourself how production increases up to 50% and more are common! Write to The Union Metal Manufacturing Co., Canton 5, Ohio, for Folder MH-809 and typical T & M Studies.

*Patent No. 2,445,033. Other patents pending.

UNION METAL
Materials Handling Equipment

circle NED-551 K3 on enclosed inquiry slip ▲

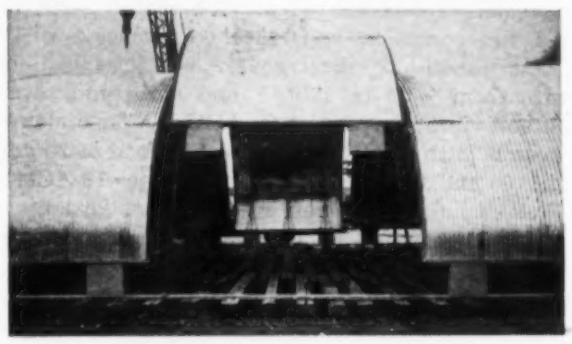
OPAQUE PROJECTOR
copy is protected from burning by fan

Having an aperture large enough to project all the printed or written area of most books, magazines and letter size paper, model AP 1000 optical projector has a 1000-w bulb and a coated 22-in. focus projection lens. Dual purpose cooling fan keeps projected object cool, even with the platen completely covered, and at the same time prevents thin material or sheets from fluttering, holding them down flat on the platen. Rack and pinion focusing is used, and spring loaded elevating legs simplify raising the image to proper screen level. Accessories available include an optical pointer which spotlights any desired feature on the screen, and a roll feed attachment which eliminates raising and lowering the platen. Made by **American Optical Co.**, Projector Div., 80 Heard St., Chelsea 50, Mass.

▲ For more details circle NED-552 K3 on enclosed inquiry slip ▲

STORAGE SHELTER
readily erected building is sectional and mounts on track

Storage of large, heavy machinery and equipment, often relegated to the open yard because of handling difficulties and lack of inside space, is now possible



in this curved metal storage shelter. Building which looks like conventional corrugated hut is sectional and mounts on track rather than on foundation. Sections tilt from either side for easy access, or can be slid apart to provide unlimited head room for handling. Sections can also be telescoped or nested at the ends to expose entire contents of the shelter.

Heavy equipment, such as industrial furnaces, can be positioned with heavy truck cranes, then shelter sections simply set over it. Practically any size of storage building can be assembled. Made by the Joe Martin Co., shelters are distributed by **Yard-Stor Shelter Co.**, 19256-58 John R St., Detroit 3, Mich.

▲ For more details circle NED-553 K3 on enclosed inquiry slip ▲

THIS light-weight HEAVY-DUTY MAGCOA DOCKBOARD IS
A BETTER INVESTMENT—*here's why*

There are three reasons why this is the perfect Dockboard for *this* installation. (1) It is the exact length required for *this* car-to-dock span, with proper allowance for car width variations. (2) The dock end of the board is flared just enough for use on *this* narrow dock, permits part of the turn to be made while the truck is on the board. (3) It is built for weight requirements of *this* company's handling equipment and loads, with a margin of safety to spare.

Your dock is different and your local Magcoa Representative knows it. He's a loading dock expert—thorough and quick in fitting a Magcoa Dockboard to your specific needs. Then mass-production specialists at the Magcoa factory take over. Result: a light-weight HEAVY-DUTY Dockboard that solves your specific problems, quickly . . . and permanently.

Safety, Service, Facts—Quarter-round safety curbs, one-piece hand holds and the other Magcoa safety and efficiency features make your Dockboard safe, permanent equipment. You get Magcoa Service, too, if abuse or misuse puts your Dockboard out of operation. Our free new **Facts File** gives you all the facts. It's yours for the asking.

MAGNESIUM COMPANY OF AMERICA
MATERIALS HANDLING DIV. • EAST CHICAGO 6, IND.

▲ For more details circle NED-554 K3 on enclosed inquiry slip ▲

THERE'S A
Morton FIXTURE CLAMP and/or COMPONENT TO FIT YOUR MOST *Exacting* REQUIREMENTS

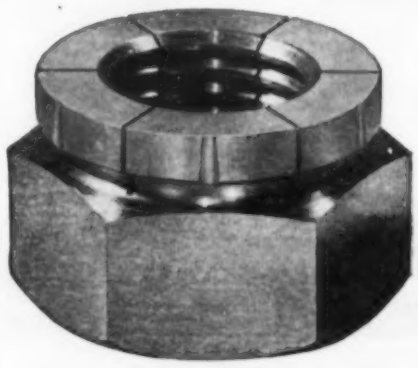
● ECONOMIZE . . . Use them as STANDARDS. Your tool stores should have a representative stock of all MORTON details.
● HIGHEST QUALITY of workmanship and materials maintained. Backed by over 30 years of fine tool making.
● IMMEDIATE DELIVERY on Standards. May be modified to suit your application.

Write for: Instructive Illustrated Catalog containing full size templates of each product for tracing purposes.

MORTON MACHINE WORKS
2421 WOLCOTT STREET • DETROIT 20, MICHIGAN

▲ For more details circle NED-556 K3 on enclosed inquiry slip ▲

they're ONE piece, ALL metal...



no parts to work loose or get lost

Because they are one piece—nothing to assemble, come apart, lose or forget—FLEXLOC locknuts save production time. Because they are all metal, they lock and stay tight at higher temperatures. See your local industrial distributor for literature and samples or write SPS, Jenkintown 24, Pa.

Our Fiftieth Year: A START FOR THE FUTURE

FLEXLOC LOCKNUT DIVISION

SPS
JENKINTOWN PENNSYLVANIA

▲ For more details circle NED-557 K3 on enclosed inquiry slip ▲

REG. U. S. PAT. OFF.
Kleenslot
WEDGE-WIRE
PREPARATION SCREENS
FOR DEWATERING, SIZING AND SCREENING OPERATIONS

The chemical, food and general industries can't afford to overlook this product. Accurate openings, great strength, long life and economy makes WEDGE-WIRE Preparation and Vibrator Screens and Screen-Guards "front line" products.

Cross section at left shows how KLEENSLOT Screens operate on a non-clogging principle.

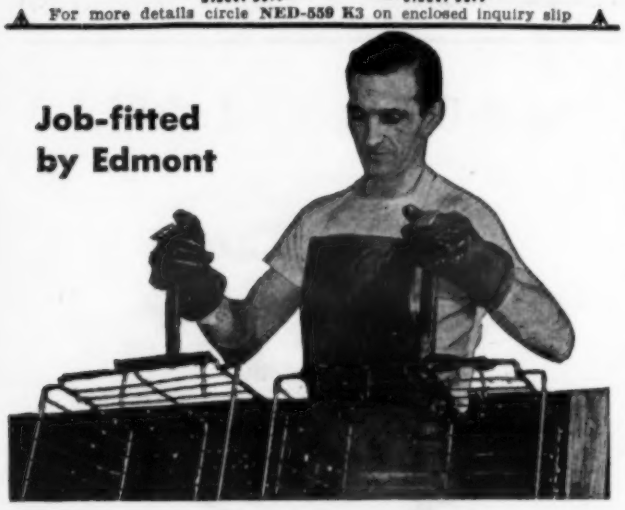
SEND THIS COUPON TODAY! • DON'T DELAY

WEDGE WIRE CORP.
5604 Clark Ave., Cleveland 2, Ohio
Gentlemen:
Please send us literature outlining the superiority of Wedge Wire construction.
COMPANY _____
NAME _____
ADDRESS _____

Wedge-Wire CORPORATION
5604 CLARK AVE. CLEVELAND 2, OHIO

▲ For more details circle NED-558 K3 on enclosed inquiry slip ▲

▲ For more details circle NED-559 K3 on enclosed inquiry slip ▲



CASE NO. 217: Work in 120°-180° chromic acid solutions required snag-resistant gloves. Neoprene coated gloves used lasted 3-4 hrs. Job-fitted gloves with 30% thicker red NEOX (reinforced neoprene) coating now average 4 to 5 days.

Job-fitted gloves are safer, and cost less

(usually save 40% to 70% of glove costs)

On many industrial operations, modern gloves made of coated fabric have largely replaced canvas, leather and unlined rubber gloves. Improved coatings, now available, far exceed these older materials in their resistance to cutting action, abrasion, oils, greases, acids, caustics, solvents, degreasants and extremes of temperature.

In addition to cost savings averaging 40% to 70% (as much as 30c per man hour saved under severe conditions) these *job-fitted* gloves solve many problems — from avoiding fingermarks on polished laminates to preventing acid burns in plating baths — from repelling sharp slivers in broach coolant to providing a firm grip on sheet glass.

Make This Simple Test at Our Expense

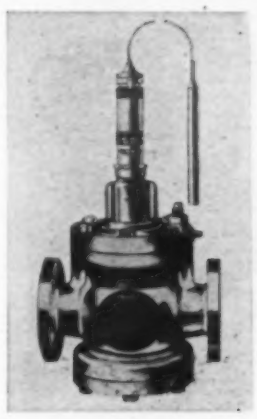
Send a brief description of your operation, materials handled and temperature condition. Without charge, we will recommend and supply sample job-fitted gloves and procedure for testing on-the-job. As world's largest maker of coated industrial gloves our laboratory also develops special gloves to meet special problems. Address Safety Engineering Service, **Edmont Manufacturing Company, 1240 Walnut St., Coshocton, Ohio.**

Edmont job-fitted work gloves

Recommended and supplied by leading industrial distributors

▲ For more details circle NED-560 K3 on enclosed inquiry slip ▲

TEMPERATURE REGULATORS
range is from 25 to 275° F

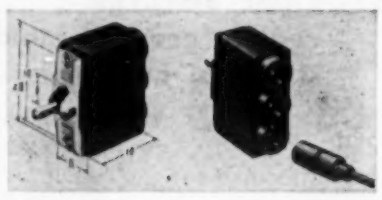


Design simplicity is feature of these self-operating temperature regulators made in type V1000 direct acting and VR1000 reverse acting types for heating and cooling applications, respectively. Single seated pilot valve positions piston of main valve, which controls throttling position of main valve disk. Built-in steam strainers protect vital parts of both pilot and main valves.

Sizes range from 2 to 4 in., and temperature control is from 25 to 275° F through 50° F range. Maximum pressure limit is 125 psi. Liquid filled thermal system, consisting of 8 ft of nickel plated copper capillary and bulb, is easily replaced in the field without removing regulator from line. Made by **Farris Stacon Corp.,** 551 Commercial Ave., Palisades Park, N. J.

▲ For more details circle NED-561 K3 on enclosed inquiry slip ▲

TOGGLE SWITCHES
two series are waterproof



Molded-in female waterproof connector receptacles are featured in two series of waterproof toggle switches, designed for assembly with male waterproof plugs. All metal parts are plated for corrosion resistance. Switches are 100 per cent waterproof, meet government specifications, operate from −65 to 160° F and withstand severe shock and vibration. Series 29-ACM is a flush mounting switch, with capacities on resistive load of 25 amp at 24 v dc and 15 amp at 125 v ac. Series 19-ACM is one hole mounted and has a capacity of 25 amp at 24 v dc and 11 amp at 125 v ac. Each is offered as single pole-single throw or single pole-double throw, in eight toggle arrangements, with or without a center "off" position. Made by **Riverside Mfg. & Electrical Supply Co.,** 10228 Michigan Ave., Dearborn, Mich.

▲ For more details circle NED-562 K3 on enclosed inquiry slip ▲

High Speed Steel Milling Cutters

Goddard & Goddard Co. — Standard solid high speed steel milling cutters and end mill holders, including new addition of 147 sizes in the end mill line are described, specified and illustrated in new 52-page catalog. Also notable are a heavy duty end mill adaptor, its auxiliary equipment and a quick change shell end mill adaptor.

▲ For more details circle NED-563 K3 on enclosed inquiry slip ▲

Which Operation is *Your* Bottleneck?

Speed Output with LIGHTNING-FAST ELECTROPUNCH

- All-electric solenoid operated impact hammer with *controllable* blow
- Compact/economical/versatile/ Plugs into 110 A.C. outlets
- Lightest model only $98.75

PRODUCES UP TO 5,000 hand positioned pieces per hr./ faster with automatic switching!

Write for all the details!

BLACK & WEBSTER, INC.

Dept. 1, 445 Watertown St., Newton 58, Mass.
Also Bigelow 4-6370

Manufacturers of ELECTROSTAKE and ELECTROPRESS

▲ For more details circle NED-564 K3 on enclosed inquiry slip ▲

NO BREAKS WITH PENFLEX ON TANK SETTLEMENT

PENFLEX FLEXIBILITY ALLOWS LINES TO WALK WITH TANK

Heat . . . cold . . . tank settling—all made rigid pipe on oil storage tanks move, bend and break.

Then Penflex "Flexineering" solved the problem. Pipe breakage was eliminated with a length of 12" I.D. four-wall interlocked, specially packed Penflex tubing . . . installed with tight-packed flanges. Now any amount of thermal expansion or tank settling can occur with no leaks, breaks or spillage.

Penflex tubing is tight as a pipe . . . yet flexible under all conditions. Let Penflex engineers help solve your tubing problems. Penflex manufactures a complete line of four-wall interlocked and seamless welded corrugated flexible tubing . . . metallic hose and couplings from ⅛" I.D. and up. Write for folder "Flexineering"—solve your tubing questions.

Write for this helpful folder, "Flexineering."

Pennsylvania Flexible Metallic Tubing Co., Inc., 7208 Powers Lane, Phila. 42, Pa.

PENFLEX

HEART OF INDUSTRY'S LIFE LINES

▲ For more details circle NED-565 K3 on enclosed inquiry slip ▲

This NEW Book . . .

tells you how to . . .

- INCREASE PRODUCTION
- LOWER COST PER PIECE
- WORK TO CLOSER TOLERANCES

60-page GUIDEBOOK tells how to get better surface grinding results . . . how to grind various materials . . . how to select the right abrasive disc for the job . . . how to care properly for abrasive discs—PLUS hundreds of operating hints!

Get the most out of your disc grinders. Send for your FREE copy today.

GARDNER MACHINE COMPANY
460 Gardner Street • Beloit, Wis.

▲ For more details circle NED-566 K3 on enclosed inquiry slip ▲

On the ball for Quality

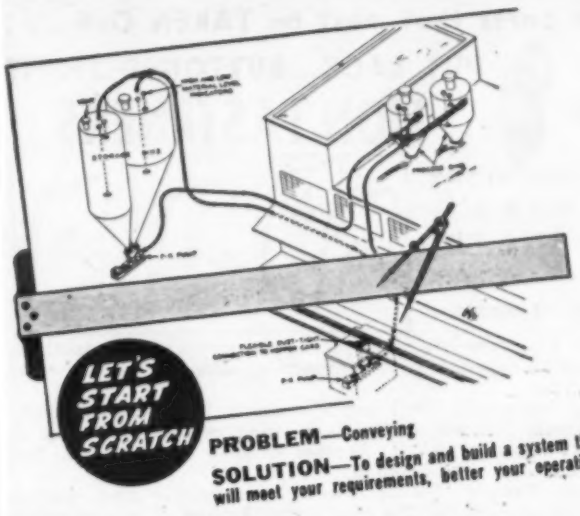
HOOVER BALLS

steel • brass • bronze
monel-metal
stainless steel

AMERICA'S FOREMOST BALL MANUFACTURER

HOOVER BALL AND BEARING CO.
ANN ARBOR, MICHIGAN

▲ For more details circle NED-567 K3 on enclosed inquiry slip ▲



Fuller Company designs and manufactures four primary types of pneumatic conveying systems for dry pulverized and granular materials. This permits the selection of the system best adapted to specific requirements—best equipped to handle most efficiently the materials being conveyed.

Each job is considered separately. That's why we say "Let's start from scratch" . . . when the plant is in the design stage. Then a preliminary study of local conditions can be made—and the proper equipment and layout recommended by specialists in the field of pneumatic conveying. We strongly urge all prospective purchasers to avoid preliminary engineering and to permit us to submit a recommendation or engineering study.

Fuller has a tangible resource in a personnel with many years of experience in all phases of pneumatic conveying. Fuller engineers are at your service to make a study of your requirements and to make a recommendation. There is no obligation, of course.

G67A

Fuller FULLER COMPANY, Catasauqua, Pa.
120 S. La Salle St., Chicago 3
420 Chancery Building, San Francisco 4

For more details circle NED-568 K3 on enclosed inquiry slip

Portable
SELF-PRIMING CENTRIFUGAL PUMP

Designed for drainage service and a wide range of water-handling jobs, Deming Fig. 3304 is an efficient, economical pumping unit. Made in all-iron or all-bronze construction, as specified. Impeller mounted directly on engine shaft. Unit shown is powered by Briggs & Stratton 1½ H.P., four-cycle, air cooled gasoline engine. Suction 1½"; discharge ½"; net weight 84 lbs. Length 20"; width 13"; height 19". Capacity ranges from 10 g.p.m. against 80 ft. head to 90 g.p.m. against 15 ft. head. Write for details.

THE DEMING CO. • 520 Broadway, Salem, Ohio

DEMING PUMPS FOR ALL NEEDS

For more details circle NED-569 K3 on enclosed inquiry slip

60% Saving in Man-Hours by ELWELL-PARKER Truck!

• Before purchasing this E-P fork truck, it required 20 man-hours at a grocery warehouse to unload and store 2000 cases of food. Now, with the Elwell-Parker, *only 8 man-hours are needed* . . . By tiering loads to the roof, the truck also permits maximum use of *all* floor space.

To learn about notable savings being made by Elwell-Parker trucks in over 300 different branches of industry, send for:—

FREE BOOKLET on *Scientific Materials Handling.* Ask for a copy of "Industrial Logistics".

THE ELWELL-PARKER ELECTRIC COMPANY
4096 St. Clair Avenue • Cleveland 3, Ohio

For more details circle NED-570 K3 on enclosed inquiry slip

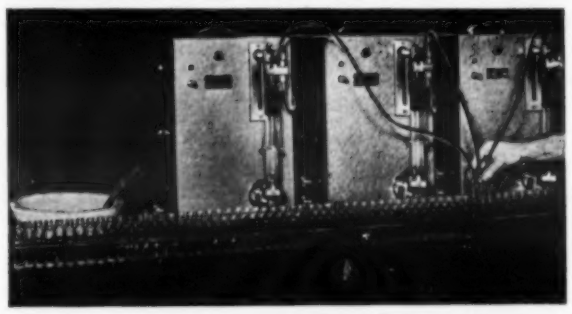
VACUUM PUMP
air removal is more than 3000 cfm

High pumping speed in the pressure range from 0.006 to 0.05-mm of mercury is performed by type KB-1500 single-stage oil ejector pump, designed for large volume dehydration and vacuum metallurgical systems. It can produce an ultimate pressure of 0.005-mm of mercury while operating against a limiting forepressure of 0.5-mm of mercury, and has an air removal rate in excess of 3000 cfm. Because of wide internal jet clearances, it can be used in systems containing large amounts of dust and other impurities. Boiler is fully insulated, and is equipped with an electric immersion type heater. Made by **Consolidated Vacuum Corp.**, 735 Ridge Rd. W., Rochester 3, N. Y.

For more details circle NED-571 K3 on enclosed inquiry slip

ELECTRONIC VIAL FILLER
fills containers up to 4½ oz and operates in tandem with other units

Any number of Filamatic Add-A-Unit electronic vial fillers can be operated in tandem for high speed filling of small containers up to 4½ oz in size. Oils, sus-

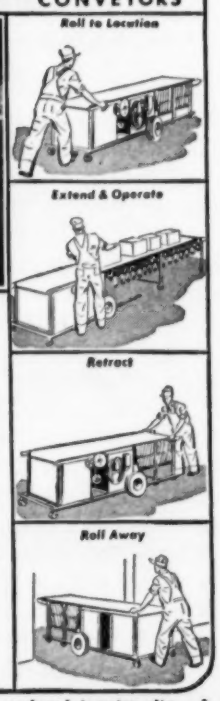


pensions, concentrated solutions and aqueous solutions are handled with equal facility. Units operate in synchronization, and removal of any one unit does not effect operation of others. The three-unit setup shown will fill 50,000 one-ounce vials in 8 hours. Only one operator is required regardless of the number of units in use.

Volume delivered by each fillet can be adjusted independently of the others, and entire filling mechanism can be removed for steam sterilizing. Pistons can be stainless steel or glass. Synchronizing mechanism and motor control are electronic. Ratios as high as 2000:1 are attainable in metering operations where varying quantities of liquid must be dispensed in batch or continuous processes. Made by **National Instrument Co.**, 5005N Queensbury Ave., Baltimore 15, Md.

For more details circle NED-572 K3 on enclosed inquiry slip

MODERN TIME AND COST SAVERS BUILT BY... Standard GRAVITY & POWER CONVEYORS



SAVE TIME LOADING — UNLOADING WITH THE
E-X-T-E-N-D-O-V-E-Y-O-R

This compact, mobile, easily maneuverable power-belt conveyor unit extends to 46 ft. in either direction and retracts to 9 ft. 10 in. Reaches into cars, trucks, trailers. Handles boxes, bags, bundles, cartons, crates, cases weighing up to 150 lbs. Available in two models—1 way stretch and 2 way stretch—and 4 sizes. Write for Extendoveyor Bulletin—address Dept. NED-103.

STANDARD CONVEYOR COMPANY
General Offices: North St. Paul 9, Minn.
Sales and Service in Principal Cities

For more details circle NED-573 K3 on enclosed inquiry slip

WE'LL SEND YOU THIS WHOLESALE CATALOG FREE!
Save Money

OVER 9,000 ITEMS INCLUDING

THE HARRY ALTER CO.
1726 S. MICHIGAN AVE., CHICAGO 16
132 LAFAYETTE ST., NEW YORK 13

For more details circle NED-574 K3 on enclosed inquiry slip

SUB-MINIATURE PILOT LIGHTS *Approved* for AIRCRAFT
AND IMPROVED IN IMPORTANT DETAILS

DIALCO

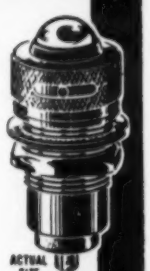
A great aid to your miniaturization program

SUB-MINIATURE INDICATOR ASSEMBLIES

MOUNT IN 15/32" HOLE
ALL LENS COLORS

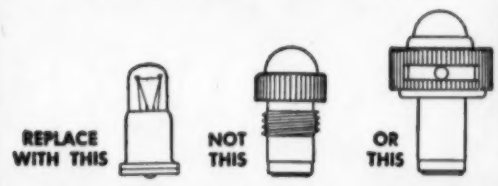
Easy lamp replacement with any midget flanged base lamp types

Complete blackout or semi-blackout dimmer types



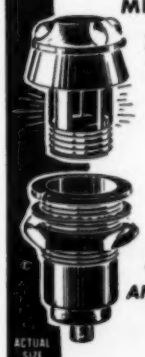
ACTUAL SIZE
NON-DIMMING No. 8-1930-621
ACTUAL SIZE
MECHANICAL DIMMER No. 11-1930-621

THESE ASSEMBLIES LOGICALLY REPLACE LAMPS NO. 319, 320, and 321



PLASTIC PLATE (EDGE) LIGHT ASSEMBLIES

AIR FORCE and BUREAU of AERONAUTICS
MIL-L-7806 DRAWING MS-25010



DIALCO *No. TT-51* (Red filter-black top) or, *No. TT-51A*, complete with No. 327 Lamp

ALSO MADE
with other filter colors and with *light-emitting top* (for indication)

ALL OF THE ASSEMBLIES ILLUSTRATED ACCOMMODATE LAMPS NOS. 327, 328, 330, and 331.

ANY ASSEMBLY AVAILABLE COMPLETE WITH LAMP

ACTUAL SIZE

SAMPLES ON REQUEST—NO CHARGE

Foremost Manufacturer of Pilot Lights
DIALIGHT CORPORATION
60 STEWART AVENUE, BROOKLYN 37, N. Y. HYACINTH 7-7600

For more details circle NED-575 K3 on enclosed inquiry slip

Quickly, Accurately with DI-ACRO* PUNCH PRESS

Deep throats—6 and 12 inches—of Di-Acro Punch Presses make them ideal for many operations impossible to perform on most bench presses.

Holes of various shapes and sizes—as large as 4" in diameter in 16 gauge steel—can be punched. Rated capacity, 4 tons. Also power models.

A wide variety of readily interchangeable punch press accessories are available for both production and experimental work. Punches are offered in round, square, rectangular and oval shapes.

*pronounced Die-ack-ro

SEND FOR 32-PAGE CATALOG
Creators of "Die-Less Duplicating"

di-acro PRECISION METALWORKING MACHINES

O'NEIL-IRWIN MANUFACTURING CO.
354 8th AVENUE • LAKE CITY, MINN.

For more details circle NED-576 K3 on enclosed inquiry slip

SAVE Maintenance AND Towel Costs WITH

Save valuable maintenance time and eliminate continuing towel expense. New, improved features make Sani-Dri faster drying . . . provide quick, automatic hand or hair drying service 24 hours a day year after year! Sani-Dri is a permanent solution to washroom sanitation and drying problems—and SAVES UP to 85% of WASHROOM COSTS!

All Sani-Dri Electric Dryers are GUARANTEED, and have carried the Underwriter's Seal of Approval for over 18 years!

SEND FOR NEW BROCHURE showing all models and installation pictures.

Distributors in Principal Cities
THE CHICAGO HARDWARE FOUNDRY CO.
"Dependable Since 1897"
19103 Commonwealth Ave. • North Chicago, Ill.

For more details circle NED-577 K3 on enclosed inquiry slip

DISCOVER

how AIR POWER can speed your production jobs

Find out how Air Power delivered by Ingersoll-Rand Type 30 Compressors, can save time, money and man-hours in your operations. Here are facts and figures every man responsible for production should have. Also, the reasons why Type 30 Compressors give you a *greater* volume of compressed air per hp input.

782-3

CLIP AND MAIL, NOW

INGERSOLL-RAND CO., 11 Broadway, New York 4, N. Y.
Please send me, at no obligation, Booklet 1502-D on the complete line of I-R Compressors.

NAME _____ TITLE _____
COMPANY _____
ADDRESS _____
CITY _____ ZONE ____ STATE _____
(Please Print)

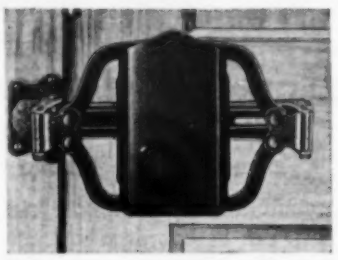
For more details circle NED-578 K3 on enclosed inquiry slip

METALLIC ELECTRICAL TUBING
electro-galvanized outside coating

With a bright outside surface of electro-galvanized zinc, and a friction-reducing baked-on enamel interior, Xduct Junior electrical conduit is both corrosion resistant and offers minimum resistance when "fishing" wires and cables. The finish is reported to approach stainless steel in appearance, and to resist flaking or cracking even when the tubing is bent. Conduit is available in 10-ft lengths of standard diameters ranging from ½ to 2 in. Connectors and couplings which match conduit in appearance and properties are also available. Made by **National Electric Products Corp.**, Room 902, Gateway Center, Pittsburgh 22, Pa.

For more details circle NED-579 K3 on enclosed inquiry slip

DOOR CHECK & CLOSER
spring size is only variable



Toggle principle and simple construction of the Kant-Slam door check and closer allows doors to close smoothly and silently. Being self-contained, it is not fastened solidly to door, leaving door and hinges free of any strain or pressure. Device holds doors open 15 degrees past right angle without special adjustment. A light finger touch closes door automatically and silently. Check is made in one size since spring size only need be varied according to size and weight of door. Springs are exchanged without removing check, and closing speed is adjusted by outside screw. Made by **Kant-Slam Door Check Co.**, 15 W. Spring St., Bloomfield, Ind.

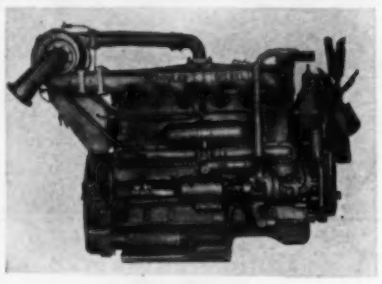
For more details circle NED-580 K3 on enclosed inquiry slip

BREATHING APPARATUS
has 30-minute air supply

Weighing 8½ lb complete, Pocketaire breathing apparatus uses oxygen cylinders to provide a 30-minute air supply. It features a 5-minute escape cylinder, which can be opened when the large cylinder is exhausted, making it unnecessary for the user to keep track of the supply available by watching a pressure gage. It can be recharged from any standard oxygen cylinder. The device is also available with two 5-minute cylinders. In this form it is especially useful for fighting small fires, and weighs 4½ lb complete. Made by **Cycle-Flo Co.**, Box 228-N, Milford, Conn.

For more details circle NED-581 K3 on enclosed inquiry slip

DIESEL ENGINE
turbosupercharged, delivers 318 hp



Designated DFXE-TS, this turbosupercharged diesel engine develops 846 lb-ft torque at 1800 rpm and 318 hp at 2000 rpm, and is suitable for power construction and oil field machinery, mining equipment and other applications where compactness is necessary. Unit has a fan-to-flywheel length of 61⅜ in., and a stripped weight of approximately 3000 lb. Features include force feed lubrication to connecting rods, main and rocker arm bearings and piston pins, high alloy steel valves with valve rotators and heat treated aluminum alloy pistons. An intake air heater is provided for cold starting, and either 12, 24, or 32-v electrical system is optional. Made by **Hercules Motors Corp.**, 111 Eleventh St. S.E., Canton 2, O.

For more details circle NED-582 K3 on enclosed inquiry slip

For parts that must be TAKEN OFF . . .
PUT BACK...BUTTONED TIGHT

LION FASTENERS

LOCKS TIGHT WITH A QUARTER TURN
Always at correct tension

Lion Fasteners are *right* for buttoning parts that must be removed repeatedly for inspection, maintenance, or other reasons.

Vibration and shock can't loosen a Lion Fastener. Even an inexperienced service man can't replace it wrong. A quarter turn opens it. Another quarter turn locks it. The tension is *designed into it.*

Lion Fastener Spring Assembly is quickly spot welded or riveted in place. The stud cannot be lost. It is grommeted tight to the sheet. They will button sheets .040 plus or .020 minus over or under standard rating. The misalignment is as much as .156. The one-piece forged stud is tested to 1425 lbs. Write today for demonstration kit and application data. *TYPICAL APPLICATIONS:* INSPECTION PLATES • COWLING • ELECTRICAL PANELS • CABINETS • DUCTWORK

FREE DEMONSTRATION KIT
contains sample Lion Fasteners to help you visualize their adaptability to your product. Write on your company letterhead. No obligation.

LION FASTENERS, INC.
600 Main St., Honeoye Falls, N. Y.
In Canada:
A. T. R. Armstrong Co., 50 St. Clair Ave. West, Toronto

For more details circle NED-583 K3 on enclosed inquiry slip

View of Pines Semi-Automatic in large aluminum plant bending extruded automobile window frames. Output easily meets production line capacity.

PINES Hydraulic SEMI-AUTOMATIC BENDER

FOR PRODUCTION, SHORT-RUN AND MAINTENANCE JOBS, YOU'LL LIKE THESE PINES FEATURES

1 **Simple Tooling** — provides an efficient, economical method of handling a variety of work not adaptable to fully automatic equipment.

2 **Safe, Dependable Accuracy** — smooth, adjustable hydraulic power forms neat bends, assures uniform results, cuts scrap losses.

3 **Easy to Set Up and Operate** — simple tooling adjustments, easy toggle clamping, push-button operation, convenient hand wheel for angle-of-bend selection.

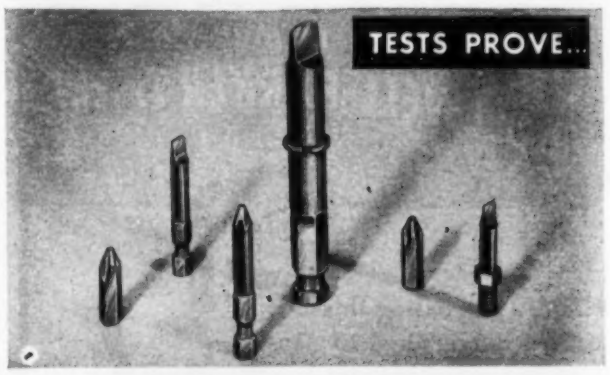
4 **Saves Floor Space** — compact, self-contained hydraulic unit includes motor, pump, reservoir. Occupies less floor space — 3' x 7'

SPECIFICATIONS
- Std. Max. Capacity — 1" O.D. 16-ga. steel tube.
- Max. Rad. of Bend — 8½" to centerline.
- Tube Lengths — up to 5 ft. std. (Provision for longer lengths if required).
- Speed — 29 rpm.
- Working Height — 35".
- Motor — 3 hp.
- Pump — 7 gpm.
- Optional — Adjustable gauges, mandrel for critical bends.

Write For More Facts... Get full details on this dependable, economy-model Pines Bender designed to handle a variety of pipe, tube, bar, and extrusion bending work at speeds up to 500 bends per hour.

PINES ENGINEERING CO., INC.
Specialists in Tube Fabricating Machinery
BENDING • DEBURRING • CHAMFERING • THREADING MACHINERY
640 WALNUT
AURORA • ILLINOIS

For more details circle NED-584 K3 on enclosed inquiry slip



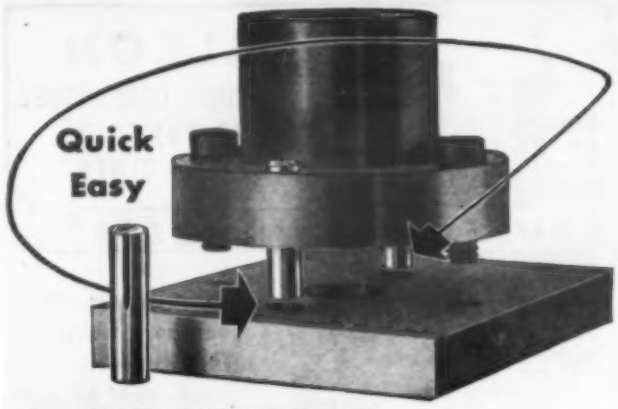
HOMMEL ALL METAL BITS
DRIVE MORE SCREWS!

Close tolerance machining of finest, toughest shock-and-abrasion resistant tool steel is the reason — the reason Hommel All Metal power screwdriver bits outperform, outlast all others! Tests by major aircraft and automotive manufacturers actually *prove* Hommel bits last longer, cut production costs. All types and sizes are now in the Hommel line — hex drive, threaded or "Stubbies" for slotted, Phillips or Frearson (Reed and Prince) screws. Write for new catalog.

HOMMEL ALL METAL BITS

"Quite a Bit—Lasts Quite a Bit Longer"
All Metal Bit Company, 727 Penn Avenue, Pittsburgh 21, Pa.

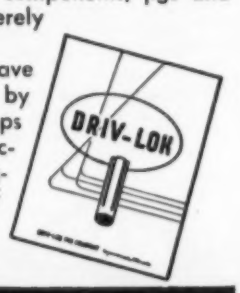
For more details circle NED-585 K3 on enclosed inquiry slip



LOCATING

Design and Production men alike find that Driv-Lok Pins, used as locating or positioning pins, save time and labor in the assembly of machine components, jigs and fixtures. Installation is simple—merely drill a hole and drive in the pin.

Products of every description have been improved and costs reduced by the use of DRIV-LOK Pins. Perhaps they can serve you in your production problems. Our Catalog suggests many typical applications of these versatile pins. Write for it —there is no obligation.



DRIV-LOK PIN COMPANY
717 Chauncey Street, Sycamore, Illinois

For more details circle NED-586 K3 on enclosed inquiry slip

Heavy metal parts now shipped in Cardboard instead of Wood

—THANKS TO NEW POLYKEN HIGH TENSILE TAPE

New Polyken High Tensile Tape enables the Hawker Manufacturing Company of Dayton, Ohio, to cut shipping costs by using cardboard cartons instead of wooden crates. This saving was never possible before because no other method or material satisfactorily closed and reinforced the cartons.

Here's why Polyken High Tensile, Cloth-Backed Tape does the job:

This is the only high tensile tape with non-split cloth backing—plastic coated to resist weather.

Excellent adhesive quality fuses this tape to the carton without crushing or cutting—provides lasting hold without creep or edge roll. Application is fast—6 times faster than banding—and no special tools are required.

New Polyken High Tensile Tape now available in Gloss Black, No. 360; and Non-Staining Gloss White, No. 361. Write for free samples and specifications. Polyken, Dept.NEJ,222 West Adams Street, Chicago 6, Ill.

Polyken®

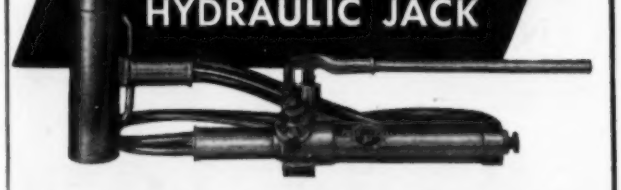
INDUSTRIAL TAPES

Department of Bauer & Black · Division of The Kendall Company

For more details circle NED-587 K3 on enclosed inquiry slip

SPEED UP ★ PRODUCTION ★ MATERIALS HANDLING ★ MAINTENANCE

WITH A **HEIN-WERNER** 20 TON PUSH and PULL HYDRAULIC JACK



You'll be amazed at the time and manpower you can save on tough lifting, moving, pressing, ejecting, clamping, or straightening jobs with a Hein-Werner J-20 Hydraulic Jack.

The J-20 can be carried anywhere in the plant . . . set up in seconds . . . easily operated by one man. It will push up to 20 tons or pull 13½ tons. You merely turn a valve from right to left to change the action. Remote control pump works at any angle, in any position, without becoming airbound. Safety valves prevent overloading. Varied attachments are available to adapt the jack perfectly to any type job. Other Hein-Werner models of 4 and 10 ton capacities are also available. See your industrial supply distributor or write us.

HEIN-WERNER CORPORATION
Waukesha, Wisc.

Hein-Werner HYDRAULIC JACKS

For more details circle NED-588 K3 on enclosed inquiry slip

AIR CIRCULATOR & HEATER will also spot cool or humidify

Extremely portable, 28-lb Palmaire, Jr. is a four-way appliance for office comfort which will heat, humidify, circulate air or spot cool as desired. UL-approved, unit has 1350-w heating element that produces 4600 Btu. When used as humidifier, unit is filled from the side through pull-out trough with 2 gal of water. Special pump circulates water from reservoir in bottom of the unit over spun glass pad. Air is thoroughly filtered as it is drawn through pad for distribution by fan throughout dry room. Humidified air can be warmed by heating element, or unheated, unit can act as evaporative cooler. As an air circulator, unit will move 700 cfm of cool, filtered air. Made by **Palmer Mfg. Corp.**, Dept. N, 705 W. Jefferson St., Phoenix, Ariz.

For more details circle NED-589 K3 on enclosed inquiry slip

GASOLINE ENGINE aircooled, rated 6.6 hp at 3600 rpm

Delivering 6.6 hp at 3600 rpm, model K160 aircooled stationary gasoline engine weighs 67 lb and is a four-cycle single-cylinder type. It is equipped with oil bath air cleaner, ball bearings, silencer muffler, fly-ball governor and a 1¼-gal fuel tank. Three alternatives are available, one with a direct-mounting crankcase, one with a 6 to 1 reduction gear and the other with a hand clutch. Contact breaker points are readily accessible, and the breaker itself is dust and moisture proof, with a stop button mounted on its cover. Made by **Kohler Co.**, Dept. 2, Kohler, Wis.

For more details circle NED-590 K3 on enclosed inquiry slip

Belt Conveyor Idlers

Link-Belt Co.—Over 500 belt conveyor idlers in 34 types for practically any requirement are illustrated and described in 48-page book 2416. Included are light, medium and heavy duty 20-degree troughing idlers, two styles of 45-degree idlers, flat belt, belt training, rubber cushion and variable troughing idlers, all in broad range of roll diameters and belt widths. Much general data are included.

For more details circle NED-591 K3 on enclosed inquiry slip

Widely Adaptable!

NOPAK Model V, 3- and 4-Way

Pilot Operated Slide Valves

Pilot Pressure or Bleeder Operated . . . these unique air valves permit an infinite variety of cycling in the direct or remote control of continuous or intermittent cylinder action. They may be energized by means of 2-way hand, cam or foot poppet valves; solenoid pilot or bleeder valves. Light weight, all-aluminum construction, simple design and small size make them adaptable to many uses which other valves cannot fulfill.

Write for Illustrated Bulletin "V"

GALLAND-HENNING NOPAK DIVISION
2755 S. 31st Street • Milwaukee 46, Wisconsin

Write for NOPAK Bulletin "V"

Representatives in Principal Cities

NOPAK VALVES AND CYLINDERS
DESIGNED for AIR and HYDRAULIC SERVICE

A 7579-1/9

For more details circle NED-592 K3 on enclosed inquiry slip

Tube Talk THE "HOW-TO" COLUMN

PROBLEM: Tubing for automatic electric immersion heaters, manufactured by The Still-Man Company, New York, N.Y., failed in forming operations. Finish was also poor, requiring additional work before shipment. These heaters are used in tanks holding chemicals, photographic solutions, drugs, water, electroplating solutions, etc.

SOLUTION: After trying a variety of alloys, The Still-Man Company selected corrosion-resisting Weldrawn 316 Stainless Steel tubing ⅜" O.D. x .032 wall, furnished by Superior Tube Company.

RESULT: Since using Superior Weldrawn Stainless Tubing, Still-Man has had negligible rejects due to bending and forming. Finish required no additional treatment. Production now standardized.

Suggestion—Write for information and literature today.

SUPERIOR TUBE COMPANY
2018 Germantown Ave., Norristown, Pa.

For more details circle NED-593 K3 on enclosed inquiry slip

Lepel's 3 new

LOW COST • PORTABLE HIGH FREQUENCY *Induction* **HEATING UNITS**

Ideal for . . . .

- Production Heating of small parts
- Educational Institutions
- Research Laboratories
- Machine Shops
- Tool Rooms

HARDENING MELTING • BRAZING ANNEALING • SOLDERING

The Lepel line of induction heating units represents the most advanced thought in the field of electronics as well as the most practical and efficient source of heat yet developed for industrial heating. With a background of half a century of pioneering electrical and metallurgical experience, the name Lepel has become the symbol of induction heating equipment embodying the highest standards of engineering achievement, dependable low cost operation and safety.

Amazing in its speed, Lepel equipment reduces the time required for hardening, annealing, stress relieving, brazing, soldering and melting from minutes to seconds. It performs these operations with a degree of precision and uniformity rarely attained through other processes.

LEPEL Electronic Tube GENERATORS available from 1 kw. to 100 kw.
LEPEL Spark Gap CONVERTERS available from 2 kw. to 30 kw.

WRITE FOR THE NEW LEPEL CATALOG . . . 36 illustrated pages packed with valuable information on high frequency induction heating.

All Lepel equipment is certified to comply with the requirements of the FCC.

LEPEL HIGH FREQUENCY LABORATORIES, INC.
55th STREET and 37th AVENUE, WOODSIDE 77, NEW YORK CITY, N. Y.

For more details circle NED-594 K3 on enclosed inquiry slip

Custom-Made Skill

Makes Custom-Made Dies at PROGRESSIVE!

FOR CUSTOM — RESULTS CALL ON THE CUSTOM SHOP!

In craftsmanship . . . in equipment . . . in results . . . you simply cannot beat PROGRESSIVE — the *custom die-making* shop for over 25 years!

CALL ON PROGRESSIVE FOR:

- DIES – BENDING
- DIES – BLANKING
- DIES – DIE CASTING
- DIES – EMBOSSING
- DIES – PROGRESSIVE
- DIES – PUNCHING and STAMPING
- DIES & TOOLS – SPECIAL
- DIES – STAMPING
- DIES – TRIMMING

Send NOW for your copy of the PROGRESSIVE story of men & machines

Progressive TOOL & DIE COMPANY
Commercial & Foster Streets • Worcester, Mass. • Tel. 5-8608

TODAY'S ACCURACY MEANS TOMORROW'S REPUTATION!

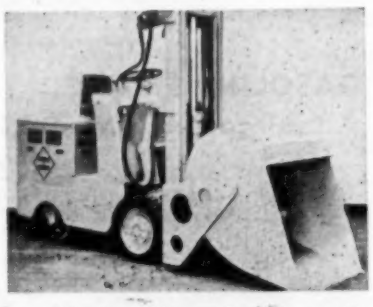
▲ For more details circle **NED-595 K3** on enclosed inquiry slip ▲

TRANSFORMER TYPE DIMMER
compact unit rated at 2000 w

Designed for controlling intensities of low capacity lighting circuits, the Varistat autotransformer dimmer is rated at 2000 w, 110-120 v, 60 cycles, continuous duty. Brush track of the 15-lb unit is surfaced with silver for resistance to wear and corrosion. Noninterlocking dimmers are available in single or multiple assemblies, front or back-of-panel mounted. Interlocking types in various mounting frameworks, as well as remote control motor-operated units, are also available. Made by **Ward Leonard Electric Co.**, 51 South St., Mt. Vernon, N. Y.

▲ For more details circle **NED-597 K3** on enclosed inquiry slip ▲

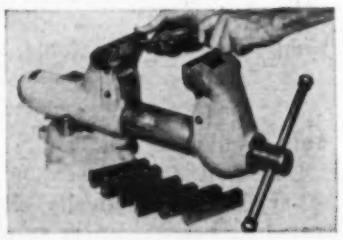
SCOOP ATTACHMENT
for hydraulic fork trucks



Wide variety of bulk materials can be handled by the scoop attachment for any Elwell-Parker hydraulic powered fork truck. It receives its hydraulic power from the same system which operates the machine's lift and tilt mechanisms. Overall width of the scoop is 37⅜ in., cubic content is 25 cu ft and capacity is 3200 lb., with maximum capacity determined by truck capacity. Wear strip on scoop lip is replaceable. Available from **Elwell-Parker Electric Co.**, 4502 St. Clair Ave., Cleveland 3, O.

▲ For more details circle **NED-598 K3** on enclosed inquiry slip ▲

REPLACEABLE VISE JAWS
reversible for long jaw life



Smooth jaws of hard or soft steel, nonmagnetic and nonsparking brass or copper or of plastic fiber for delicate work surfaces are now available to replace the hardened steel jaws with diamond serrations standard on all Wilton machinists', jewelers, combination and pipe vises. All jaws are removable and interchangeable. They are designed to be reversible if wear occurs at top surface first. Made by **Wilton Tool Mfg. Co.**, Dept. NED, 925 Wrightwood Ave., Chicago 14, Ill.

▲ For more details circle **NED-599 K3** on enclosed inquiry slip ▲

ALKON HYDRAULIC-CONTROLLED AIR-POWERED DRILL UNIT
cuts drilling costs!

Multiple-hole drilling requiring many separate production runs may now be combined in one operation with the new, extremely compact Alkon Drill Unit!

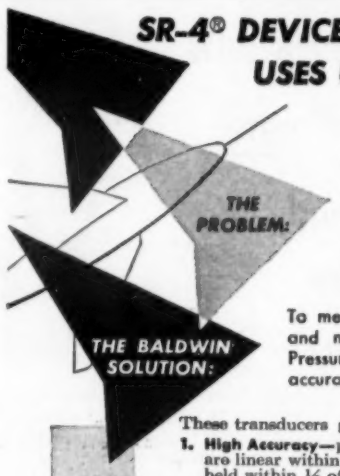
Many units may be mounted as close as 2" parallel centers, and by actuating a common operating switch, all units automatically advance quickly to the work, are governed through the work by a unique "Hydraulic Monitor", (at pre-selected feed speeds), to pre-set depths. Upon completion of stroke, rapid automatic reverse, (eliminating dwell), returns each unit individually.

Cycle after cycle, you can depend on the ALKON AIR-POWERED DRILL UNIT for high speed, consistently accurate drilling. *Investigate today! Write for brochure—NED*

ALKON *products corporation*
698 EAST 142nd ST. • NEW YORK 54, N. Y.

▲ For more details circle **NED-601 K3** on enclosed inquiry slip ▲

SR-4® DEVICES IN INDUSTRY... USES UNLIMITED



In the static testing of rocket fuel systems, Aberdeen Proving Ground needed a transducer which could respond to the high pressures and frequencies encountered.

To meet this need, Baldwin designed and manufactured 100 special SR-4 Pressure Cells with the necessary high accuracy and high frequency response.

These transducers give Aberdeen these advantages:

1. **High Accuracy**—pressure versus voltage outputs are linear within ¼ of 1% and calibration (span) is held within ½ of 1%.
2. **High Pressures**—capacities up to 20,000 psi.
3. **Limitless Frequency Response**—attached piping or vessel reaches its frequency response limit before the pressure cell reaches its limit.
4. **Versatility**—these SR-4 Pressure Cells are all interchangeable so that they may work into the same instruments. They also work easily into an oscilloscope and can be used to operate a potentiometer.

The uses for Baldwin SR-4 devices in industry are *unlimited* . . . measuring load, pressure or torque more accurately and economically. Wide range of standard capacities. Please write Dept. 3219.

20,000 p.s.i. high frequency pressure cell. Length 5½", diameter 2", weight 1 lb.

TESTING HEADQUARTERS

BALDWIN-LIMA-HAMILTON
Philadelphia 42, Pa. • Offices in Principal Cities

▲ For more details circle **NED-602 K3** on enclosed inquiry slip ▲

simple, sure and accepted!

What would you do if, because of a space shortage, your engineering drawings had to be stored 15 miles from your engineers? Otis Elevator Company was faced with this problem and it did the simplest thing of all—it "Filmsorted" its file of 140,000 engineering drawings!

here's how FILMSORT does it...

Otis "Filmsorted" its drawings by microfilming them and mounting the positive film frame of each drawing in compact, uniform Filmsort cards. Now just three standard file cabinets of Filmsort cards give Otis a duplicate of its 140,000 engineering drawings for immediate reference to all its tracings.

Space...Security...Reference...that's what Otis Elevator got from its Filmsort system. And now after months of operation, Otis finds new benefits—less wear and tear of originals, less misfiles, lower print costs. Find out why Otis "Filmsorted" its engineering drawings. *Write today for this illustrated booklet.*

FILMSORT is being used by:

- Bell Telephone Laboratories
- Hamilton Standard Propeller
- Ontario Hydro Power Commission
- Thompson Products Company
- Heald Machinery Company

. . . and many other firms.

FIND OUT WHY!

FILMSORT
DEPT. N
Pearl River New York

▲ For more details circle **NED-596 K3** on enclosed inquiry slip ▲

Speed wiring jobs with 2020 CONNECTORS
(for non-metallic sheathed cable)

T&B ENGINEERED

Just an easy finger squeeze — that's all it takes to snap a T & B 2020 connector into a junction box. Deep body grooves hold the connector in ½-inch knockouts while the one-screw tightening clamp grips the cable tightly without damage to insulation. With no loose parts and no locknuts to handle, you'll find jobs going faster than with ordinary locknut-type connectors.

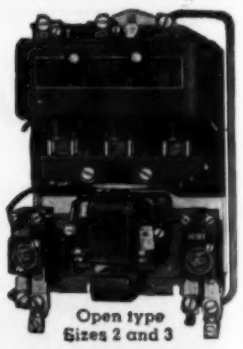
T & B has designed the 2020 connector for installation from either *inside* or *outside* of the box. *Inside* installation is particularly helpful for work in old buildings. You eliminate damage to adjacent floors or walls. You keep installation costs to a minimum.

The wide-range adjustability of the T & B 2020 connector cable clamp makes it ideal for use on portable cords and the new small-diameter, plastic-sheathed cables as well as standard non-metallic sheathed cable in sizes 14-2 to 10-3 — 2 or 3 wire. Full Underwriters' Laboratory Approval has been granted. For complete details, write for a descriptive folder. T-310

THE THOMAS & BETTS CO.
INCORPORATED
24 Butler Street, Elizabeth 1, New Jersey
Thomas & Betts Ltd., Montreal, P.Q., Canada
MANUFACTURERS OF FINE ELECTRICAL FITTINGS SINCE 1898

▲ For more details circle **NED-600 K3** on enclosed inquiry slip ▲

NEW—CLARK TYPE "CY" AC COMBINATION MOTOR STARTERS
now available in EXPLOSION RESISTING ENCLOSURES



Open type Sizes 2 and 3

The sensational new CLARK Type "CY" motor starters are offered in a wide variety of types and enclosures for use in such industrial atmospheres as hazardous gas, dust or excessive humidity. Illustrated at right, is the NEMA Type 9 Cast Iron Explosion Resisting Enclosure for hazardous dust locations on a combination starter with circuit breaker.

CLARK Type "CY" starters, sizes 2 and 3, have an entirely new arc-quenching principle which greatly increases contact life, by a constant rotation of the arc on contact surfaces.

Bulletin 6020 Type "CY" AC Combination Starter Size 2 with Air Circuit Breaker.

Write for descriptive literature.

THE CLARK CONTROLLER CO.
ENGINEERED ELECTRICAL CONTROL • 1146 EAST 152ND STREET, CLEVELAND 10, OHIO

▲ For more details circle **NED-603 K3** on enclosed inquiry slip ▲

Get the facts!

Complete data on automatic *electric* braking for machinery!

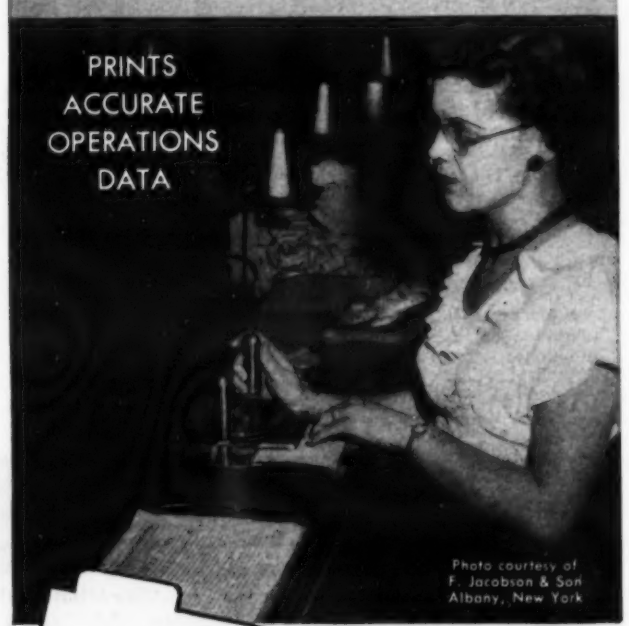
Now, you can have the *complete story* on new Warner Electric Brakes—the fastest, simplest automatic controls for all types of industrial machinery. New 16-page catalog gives you torque ratings, description of operation, control systems, and outstanding results achieved on a variety of applications. If you want faster, better brake performance, send for your free copy, today! Ask for Bulletin WEB 6114

WARNER

Warner Electric Brake & Clutch Company
Beloit, Wisconsin

▲ For more details circle **NED-604 K3** on enclosed inquiry slip ▲

Now *time* your jobs AUTOMATICALLY with CALCULAGRAPH!



Save time and eliminate clerical errors with Calculagraph accurate-to-the-minute, printed job time records. Use these data cards for computing costs, estimating on reorders. One Calculagraph can record job time data for an entire shop or department.

NEW!
AUTOMATIC DATER!

Standard on all electric models. Automatically changes date — eliminates incorrect dating of records.

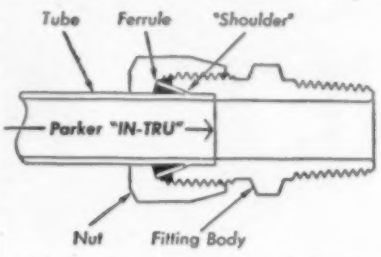
ASK FOR COMPLETE INFORMATION, TODAY
Illustrated literature and sample job cards will be sent promptly on request. Just call or write:

CALCULAGRAPH COMPANY
Sussex St., Harrison, New Jersey
STANDARD OF ACCURACY SINCE 1892

▲ For more details circle **NED-605 K3** on enclosed inquiry slip ▲

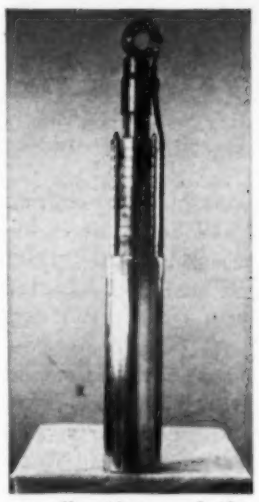
TUBE FITTINGS
suitable for instrument assemblies

Specially suited for use in instrumentation, In-Tru tube fittings give a leakproof joint with standard wrenching assembly techniques. The resultant joints can readily be broken down for inspection or for remake. The line includes most standard connector, union and junction styles. In operation, the tube is seated and the draw nut tightened. Then, ferrule wedges into the outer surface of the tube to form a shoulder. The complete process takes a matter of seconds. Couplings are available in brass for copper tube, and in aluminum alloy for aluminum tube. Various sizes accommodate tube OD's from ¼ through 1 in. Made by **Parker Appliance Co.,** Dept. NE, 17325 Euclid Ave., Cleveland 12, O.



▲ For more details circle **NED-606 K3** on enclosed inquiry slip ▲

SUBMERSIBLE WATER PUMP
1/3-hp electric well-type unit



Designed to fill water supply system requirements, the type A submersible electric water pump is furnished as a ready-to-install package complete with sealed electrical cable and motor control box with built-in overload protection and continuously-rated capacitor. Installation is accomplished by lowering the unit down a well on the end of a single 1-in. riser pipe and making the necessary piping and wiring connections. Since both motor and pump operate under water, there is no noise or vibration and the unit is protected from damage and freezing. Made by **Sumo Pumps, Inc.,** Dept. 38, 375 Fairfield Ave., Stamford, Conn.

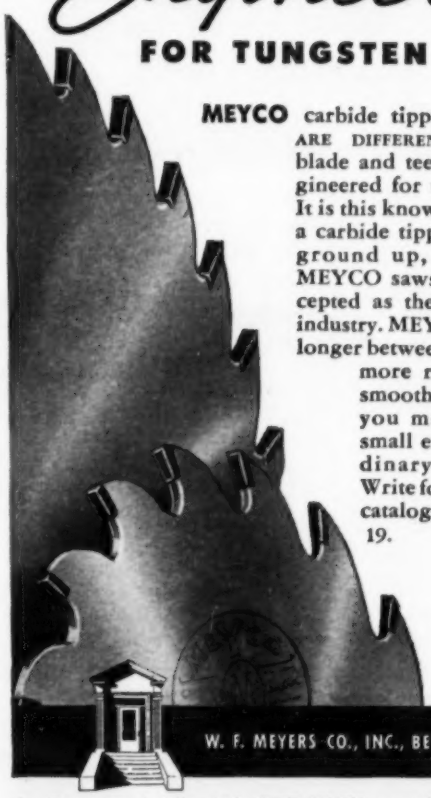
▲ For more details circle **NED-607 K3** on enclosed inquiry slip ▲

Double-Enveloping Worm Gearing

Michigan Tool Co., Cone-Drive Gears Div.—36-page booklet titled "Cone-Drive Gears At Work In Industry" illustrates 93 separate applications of double-enveloping worm gearing in 20 industrial classifications alphabetically from agricultural equipment to zinc mining. Standard center distances from 2 to 18 in. provide ratings up to 800 hp. Ratios range from 5:1 to 4900:1. Standardized components are fully utilized in construction.

▲ For more details circle **NED-608 K3** on enclosed inquiry slip ▲

Engineered FOR TUNGSTEN CARBIDE



MEYCO carbide tipped circular saws ARE DIFFERENT, because the blade and teeth have been engineered for tungsten carbide. It is this know-how of building a carbide tipped saw from the ground up, that has made MEYCO saws popular and accepted as the standard of the industry. MEYCO saws will run longer between grinds, give you more regrinds, produce smoother cuts and save you many times their small extra cost over ordinary circular saws. Write for fully descriptive catalog and price list No. 19.

W. F. MEYERS CO., INC., BEDFORD, INDIANA

▲ For more details circle **NED-609 K3** on enclosed inquiry slip ▲

Cut drafting time 40% with a BRUNING DRAFTER

Want to speed drafting in your office by as much as 40% — as proved by actual test? Here's how Bruning Drafters make such time savings possible:

COMBINES FIVE IN ONE . . . T-square, straightedge, triangle, protractor and scales are combined in a single precision machine.

EASY "FLOATING ACTION" . . . patented Equipoise mechanism counteracts gravity on inclined boards . . . mounted on friction-free needle bearings.

AUTOMATIC SETTINGS . . . at touch of button, Touch Control automatically locks Drafter at any of 24 commonly used 15-degree-increment angles. In-between angles are readily set.

FOR YOUR FILE . . . phone or write Bruning — there's an office near you — for free booklet on time-saving Bruning Drafting Machines. Charles Bruning Co., Dept.$103, 4700 Montrose Ave., Chicago 41, Illinois. A-3-4

BRUNING
Everything for the Engineer and Draftsman

▲ For more details circle **NED-610 K3** on enclosed inquiry slip ▲

JOHNSON *Graphited* BEARINGS

FOR SPECIAL USES

Johnson Graphited Sleeve Bearings were developed primarily for applications where lubrication is difficult or likely to be neglected. Other important uses are: where the shaft speed is too slow or the temperature too low to sustain an oil film; where high operating temperatures may burn out oils and greases; where lubricants might damage goods or foods in process; where dripping oil cannot be tolerated; and certain underwater applications. Johnson Graphited Bearings are available in three types: with serrated grooves, graphite plugs, and graphite-filled oil grooves. The serrated type is a stock item in over 200 sizes, available through Johnson Distributors. Write for information.

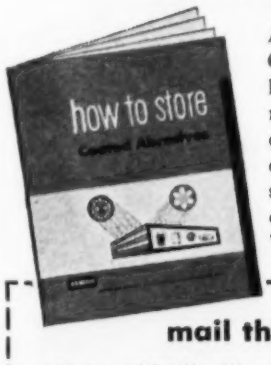
JOHNSON BRONZE COMPANY
580 South Mill Street • New Castle, Pennsylvania

JOHNSON JB BEARINGS
Sleeve-Type
Sleeve Bearing Headquarters Since 1901

▲ For more details circle **NED-611 K3** on enclosed inquiry slip ▲

Stop wasting money!

Protect your investment in coated abrasives



A new booklet from Armour's Coated Abrasives Division tells you how to stop losses—in time and money—from improperly stored coated abrasives. Clogging, filling, cracking, loss of grains—these are some of the things proper storage can prevent. Send for free copy of "How to Store Coated Abrasives."

mail this coupon today

Please send booklet "How to Store Coated Abrasives."

Name _____
Company _____
Address _____
City _____ Zone ____ State _____

ARMOUR *Coated Abrasives*

Armour and Company • North Benton Road • Alliance, Ohio

▲ For more details circle **NED-612 K3** on enclosed inquiry slip ▲

It's practically
WATER-WHITE
a NEW
chemically resistant
baking finish—
DURACHEM

For all types of metal products from heavy hardware to fine jewelry

A new baking type synthetic finish—DURACHEM—combines unusual clarity with a high degree of chemical resistance. Almost water-white—remains clear after exposure to heat and sunlight—resists salt spray and perspiration. Available in colors too.

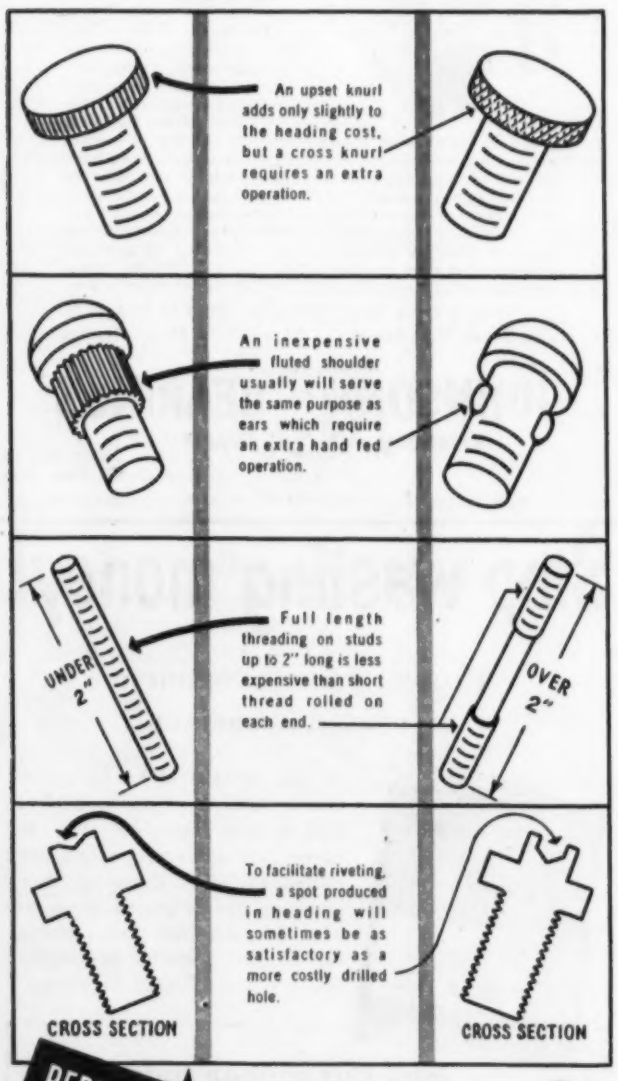
Samples and technical literature on request

MAAS & WALDSTEIN CO. 2124 McCARTER HIGHWAY NEWARK 4, NEW JERSEY
MANUFACTURERS OF INDUSTRIAL FINISHES

For more details circle NED-613 K3 on enclosed inquiry slip

STILL MORE WAYS TO
SQUEEZE PENNIES
OUT OF
UPSET SPECIALS COSTS

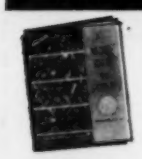
Specially designed upset products are solving thousands of problems. Dozens of design pointers on them are yours for the asking. Send us your sketches, prints, finished products for suggestions.



REPRINTS *of this and of previously published charts are available on request for use in drafting and purchasing departments.*

QUALITY PROMCO BRAND

MACHINE SCREWS AND SPECIAL FASTENERS ARE OUR BUSINESS

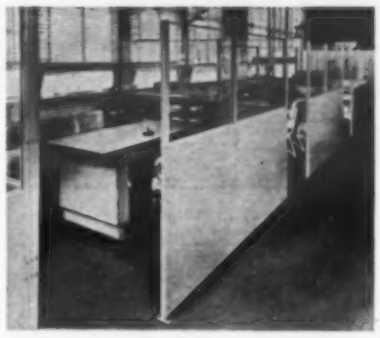


WRITE FOR OUR CATALOG

THE PROGRESSIVE MANUFACTURING COMPANY
46 NORWOOD ST., TORRINGTON, CONN.

For more details circle NED-614 K3 on enclosed inquiry slip

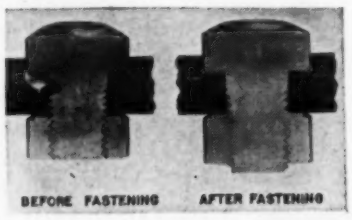
OFFICE PARTITIONS can be easily moved or relocated



Easily moved or relocated, Techniplan office partitions can be erected in any desired combination and number. They mount on a heavy metal angle which fits inside their end posts, and which can be bolted down if desired. A clamp holds the adjoining panel in position, and connectors are slotted to provide adjustment for uneven floors. The units are available in 48 and 66-in. heights. The 48-in. type can be had with either steel or glass panels, the 66-in., with steel, glass or acoustical panels. Made by **Globe-Wernicke Co.,** Dept. T, 5028 Carthage Ave., Cincinnati 12, O.

For more details circle NED-615 K3 on enclosed inquiry slip

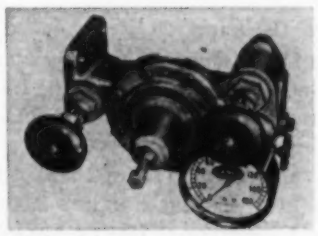
BOLT OR STUD SEAL for general purpose usage



Controlled confinement of the gland is the principle used by Stat-O-Seal for sealing bolts or studs at high or low pressures against gas, liquids or air. Sealing gland is mechanically fastened to the retainer, eliminating the possibility of bond failure, and the unit is designed so that it can only be assembled the correct way. Design also assures a good seal without high fastening torques, and since there is no load transferal cold flow of the gland is not possible. Units are made to fit the various standard stud sizes, and are available with special gland compositions such as silicone rubber and aluminum retainers for special service. Made by **Franklin C. Wolfe Co.,** 3646 Eastham Dr., Culver City, Calif.

For more details circle NED-616 K3 on enclosed inquiry slip

AIR PRESSURE REGULATOR available with multiple unit headers



Measuring only 10 in. from inlet to outlet, this air control manifold valve combines pressure regulator with accessory valves, pressure gage and fittings and is available with special headers giving up to eight stations when more than one manifold is required. These headers are suited to the addition of filters and lubricators, and are available in two, four, six and eight-station units. The control is intended for use on mechanical presses, for example, controlling such devices as die cushions, counterbalance cylinders, clutches, brakes and automation accessories. Made by **Danly Machine Specialties, Inc.,** 2100 S. Laramie Ave., Chicago 50, Ill.

For more details circle NED-617 K3 on enclosed inquiry slip

SCREWDRIVERS & NUT SETTERS are air-operated and reversible

Series of 24 lightweight, air-operated, reversible screw drivers and nut setters comprises the latest additions to the Thor No. 2 line of air tools. They feature reversible motors for removing or applying threaded fasteners and for speeding inspection, testing, service and repair of assembled products. Each of the four basic speeds offered, ranging from 475 to 2000 rpm, can have either slip or positive clutch. Lever throttle or pistol type throttle is also offered for all types. Eight additional models feature 25 per cent slip clutch drive, raising the total to 24 variations of the basic tools. Weight is only 2 lb. Made by **Thor Power Tool Co.,** 175 N. State St., Aurora, Ill.

For more details circle NED-618 K3 on enclosed inquiry slip

PANALARM
AUDIO-VISUAL SIGNALS
reduce your operating costs

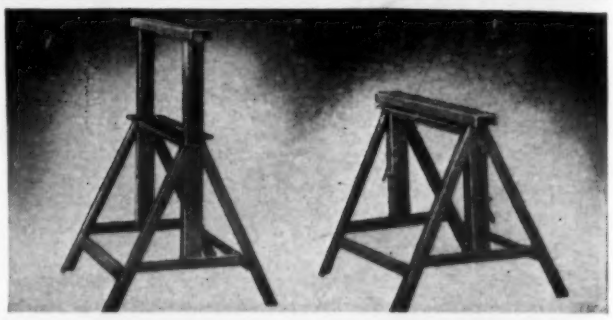
Applied to any automatic or semi-automatic process, PANALARM "50" Annunciators simplify operation. They provide a combined audible and visual signal requiring operator acknowledgment when any "off-normal" condition occurs. They give high or low signals for liquid level, temperature, pressure, mechanical limits, pump failure or any similar factor.

System is pre-wired, easily installed. All contacts and moving parts are within hermetically sealed plug-in units which assure trouble-free operation, and are suitable for Class 1, Div. 2 locations. Additional signals may be added by simply plugging into chassis.

WRITE FOR CATALOG 100.

PANALARM PRODUCTS INC.
6312 North Broadway • Chicago 40, Illinois

For more details circle NED-619 K3 on enclosed inquiry slip



EVERY PLANT CAN USE ADJUSTABLE STEEL HORSES

They are the "work horses" in every plant or shop . . . more than pay for themselves, and are never idle because of the many uses their ready adjustability will easily serve:

SPOT WELDING TABLES — SCAFFOLDING
FABRICATION SUPPORTS — CONVEYOR SUPPORTS
LAYOUT WORK — MAINTENANCE WORK
BENCHES — And many other uses

MODELS FOR HEAVY OR LIGHT WORK

Standard length 36". Low Height 24"; Extended Height 42". Adjustable at 1½" intervals. Held in position by steel lock pins. All units portable. Painted one coat chrome yellow.

Send today for BULLETIN No. 500 covering BRUSCO Boxes and Hoppers.

Brusco HANDLING EQUIPMENT
BRUMMELER STEEL PRODUCTS CORPORATION
1411 Ionia Ave., S. W. Grand Rapids, Michigan

For more details circle NED-620 K3 on enclosed inquiry slip

For more details circle NED-621 K3 on enclosed inquiry slip

FAR-INFRARED HEAT

that's easily controlled, infinitely variable!

CHROMALOX *Electric* RADIANT HEATERS

Your Low-Cost Answer to Production Line Heat!

Production line heating tunnels and banks can be easily made right on the job with versatile Chromalox Electric Heaters for drying, baking, dehydrating, curing and other applications. Quickly and easily installed units allow you to "dial" the exact temperatures you require every time—all the time! All-metal construction insures against damage from shock, hard knocks, water, etc., and eliminates contamination hazards

IB-33

WRITE FOR BULLETIN CS-604

It gives details on Chromalox Electric Radiant Heaters and shows how they reduce costs and increase production in your plant.

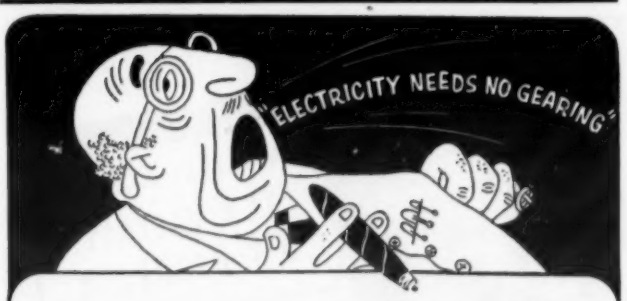
Industrial Div., EDWIN L. WIEGAND CO., 7509 Thomas Blvd., Pittsburgh 8, Pa.

See also advertisement on page 4

CHROMALOX

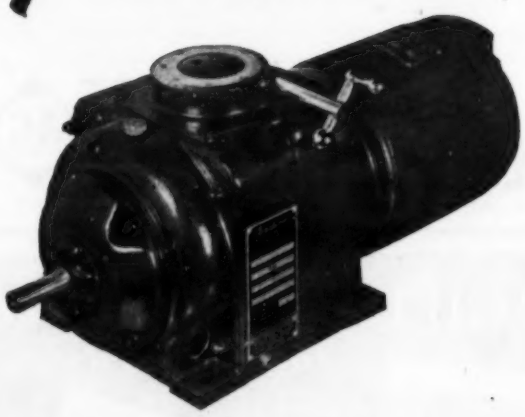
ELECTRIC HEAT FOR MODERN INDUSTRY

▲ For more details circle **NED-622 K3** on enclosed inquiry slip ▲



Don't be misled – use a Mechanical Drive for a Mechanical Job!

GET *Graham* variable speed drives



- **ULTIMATE in SIMPLICITY and COMPACTNESS**—only the Graham is a straight line extension of a standard induction motor—or available without motor.
- **UNLIMITED SPEED RANGE**—from any desired maximum speed to zero, including reverse if wanted without stopping motor.
- **UNMATCHED ACCURACY**—of speed setting and resetting and speed holding.
- **NO PERISHABLE PARTS**—such as belts or tubes, requiring periodic replacement.
- **PROVED PERFORMANCE**—Fifteen years satisfactory use as standard equipment.
- **LOW COST**—a better job for less money.

Prompt Delivery on Standard Models

GRAHAM TRANSMISSIONS, INC.
Dept. NED, Menomonee Falls, Wis.

GET *Graham* *most reliable variable speed drive made*

ENGINEERED and RATED for 'ROUND the CLOCK SERVICE

▲ For more details circle **NED-623 K3** on enclosed inquiry slip ▲

VIBRATING CONVEYOR engineered to the particular job

For handling materials which must be transported in a closed housing and are not readily moved by conventional conveyors, Oscilveyor vibrating conveyors are individually engineered for the particular application. The line oscillates with a continuing series of forward-and-up and downward-and-back movements, the magnitude of which is quite critical. An incorrect vibration-throw combination could result in the flow of the top layer of material only. Illustration shows a 64-ft long unit for the Bakelite Co., where the pan is spring-mounted and vibrated by an electric motor and special linkage. More information and engineering testing service are available from **Gifford-Wood Co.**, 23 Hill St., Hudson, N. Y.

▲ For more details circle **NED-624 K3** on enclosed inquiry slip ▲

HEIGHT GAGE has micrometer adjustment

With graduations of 0.01-in. on the barrel and 0.0001-in. on the dial, this direct reading height gage has a range of 0 to 2 in. Accurate layouts up to 6 in. are possible with the use of gage and a toolmaker's 1-2-3 block. Dial and barrel have black oxide finish with white numerals for easy reading, and the gage is fitted with a knurled adjusting knob. The main adjusting screw is of the precision ground double-lead type, and is spring loaded and mounted on ball bearings to prevent end play. All wear parts with the exception of the bearing bronze split take-up nut are of hardened and electrolized Swedish steel. Made by **Electrolizing Sales & Tools, Inc.**, Dept. NE, 1406 E. Fifteenth St., Los Angeles 21, Calif.

▲ For more details circle **NED-625 K3** on enclosed inquiry slip ▲

Electronic Design Facilities

Manson Laboratories—8-page illustrated booklet describes the facilities of this company devoted to design and production of electronic and electromechanical instruments for laboratory and industrial use. Specializing in devices not available commercially, the company makes power supplies, transmitting tube checkers, test equipment for wire and cable industry, and other instruments.

▲ For more details circle **NED-626 K3** on enclosed inquiry slip ▲

JOHNSON BAND SAWS

SPECIFICATIONS — MODEL J

BOTH WET AND DRY MODELS

Capacity—10" rounds, 18" flats.
Motor—½ H.P. Ball Bearing any voltage available, single or polyphase. (¾ H.P. on wet machine).
Wheel Diameters—16".
Floor Space—66" x 31".
Bed—11" wide, 44" long, 6" deep, 24" high.
Overall Height—(Closed)—39".
Blade Length—11'5" x ¾" x .032". All Standard blades of these specifications can be used.
Weight—Approximately 750 lbs. Crated 800 lbs. Boxed for export 875 lbs.
Speeds—35, 90, 130, 190 feet per minute.
Casters—Optional at slight extra cost.

MODEL B, 5" x 10" CAPACITY, ALSO AVAILABLE

WRITE FOR DETAILS

JOHNSON MANUFACTURING CORP.
ALBION, MICHIGAN

▲ For more details circle **NED-627 K3** on enclosed inquiry slip ▲

LOW COST COMPRESSED AIR ON THE SPOT

MOVE THE AIR SUPPLY RIGHT TO THE SPOT WHERE IT IS REQUIRED WITH A *Quincy* TX-8

Hundreds of jobs require "on-the-spot" compressed air. Quincy's Portable TX-8 Compressor is the answer to your problems. Quincy Portable Compressors are available in a wide range of sizes from 1 to 45 c.f.m. Special mountings and rugged construction enables Quincy Portable Compressors to meet extra service requirements and longer trouble-free service life.

Free folder tells you all about portable compressors. Write: Dept. NE-32 Quincy Compressor Co., Quincy, Illinois.

QUINCY COMPRESSOR CO.
QUINCY, ILLINOIS
Branch Offices:
New York • Philadelphia • Chicago
Minneapolis • St. Louis • Dallas
San Francisco

▲ For more details circle **NED-628 K3** on enclosed inquiry slip ▲

Makes Water Go Farther

Rockwood WET — a liquid prepared especially for fire-fighting — increases the spread and penetration of water. Used in solution of 1 part WET and 99 parts ordinary water.

Recommended for fires involving ordinary combustibles such as wood, paper, cloth. And excellent for use with WaterFOG where water is extremely scarce for fire-fighting — such as rural residences, barns, forest and grass fires, factories in outlying districts. Rockwood WET carries water into deep-seated fires in stumps, piles of leaves, duff and other spots where fires might smolder after flames have been extinguished — and where wind could fan smoldering embers into another open fire. With WET, such rekindling is reduced. Also excellent for dust control purposes.

Write for *"Fire-Fighting Products,"* Rockwood's illustrated catalog. Distributors in all principal cities.

ROCKWOOD SPRINKLER COMPANY

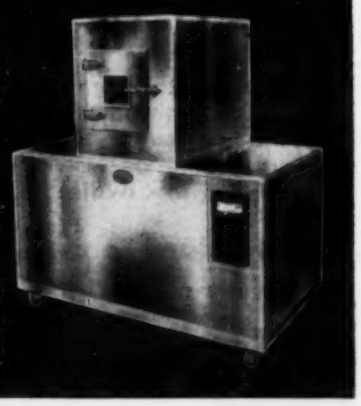
Engineers Water . . . to Cut Fire Losses

44 HARLOW STREET, WORCESTER, MASS.

▲ For more details circle **NED-629 K3** on enclosed inquiry slip ▲

WEBBER
TRADE MARK REGISTERED

TEST CHAMBER WITH HIGH-TEMPERATURE, LOW-TEMPERATURE AND HUMIDITY



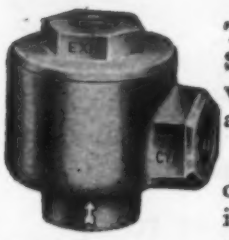
★ This Webber test unit, designed for production and experimental testing, has a temperature range from +250°F., to −100°F. The pull-down to −100°F., is achieved in 45 minutes, and can be cycled from −100°F., to +250°F., in 30 minutes. 95% relative humidity is provided at temperatures between 75°F., and 95°F. Vacuum equipment can be added to simulate high altitudes. The test chamber, provided with a moisture-proof light for illumination, is 4½ cubic feet, 20 inches high, 20 inches wide, 20 inches deep. High and low temperatures are governed by a temperature controller with scale range from −200°F., to +400°F., with a 3 degree control point differential, 1½ degrees plus and minus. The humidity is regulated by a wet and dry bulb controller. Unit size is 60" long, 45" wide, 74" high. Apertures in left side of cabinet provide for electrical cables to energize equipment being tested. Webber offers a complete line of test units for various applications.

Write for more complete information

INDUSTRIAL FREEZER DIVISION
WEBBER MANUFACTURING COMPANY, INC.
(Formerly Webber Appliance Co., Inc.)
2749 MADISON AVENUE • INDIANAPOLIS 3, INDIANA

▲ For more details circle **NED-630 K3** on enclosed inquiry slip ▲

Boost air cylinder operation with Schrader Quick Exhaust Valves



Quick Exhaust Valve Schrader #3044A

The completely automatic Schrader quick exhaust valve provides instant passage of exhaust air to the atmosphere.

Designed for mounting at cylinder ports, it speeds up piston action in either direction by dumping the air to the atmosphere, thus eliminating the usual slow-up caused by air traveling a distance to find its way to exhaust.

Complete catalog gives full information on the quick exhaust valve as well as hundreds of other products that will help you get the most out of air power in your plant. Send for it today.

A. SCHRADER'S SON

Division of Scovill Manufacturing Company, Incorporated

459 Vanderbilt Ave., Dept. E-37, Brooklyn 38, N. Y.

For more details circle NED-631 K3 on enclosed inquiry slip

It's no wonder why so many industries

Choose American

the most economical and practical

STORAGE RACKS

Heavy Duty American Skid Rack Installation, Warner & Swasey Co., Cleveland, Ohio

American

SKID RACKS

American Skid Racks are made in any size, with any underclearance, and can be erected without bolting or welding. Three types are available:

1—Standard Tubular
2—Heavy Duty
3—Extra Heavy Duty

Tiering your skids saves space . . . saves time in handling stock . . . saves time taking inventory . . . everything is always in sight.

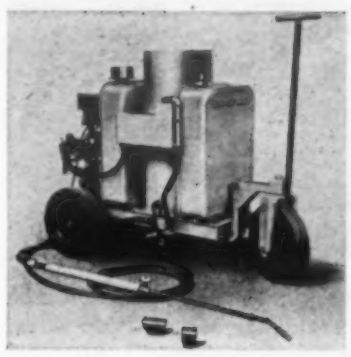
Send for Catalogue

AMERICAN METAL PRODUCTS CO.

STORAGE RACK DIVISION
5959 Linsdale • Detroit 4, Michigan

For more details circle NED-632 K3 on enclosed inquiry slip

STEAM CLEANER
moves on rubber tired wheels



Designed to roll over rough ground on its 16 x 4-in. rubber tired wheels, the model JO Hypressure Jenny steam cleaner has a heavy duty welded steel chassis. Nozzle control system saves fuel, chemicals, water and time by permitting the operator to start and stop the unit at the job, 100 or more feet from the cleaner. Full-powered blast is delivered at the cleaning gun in less than 90 seconds from a cold start. Vapor spray output is 90 gph. Made by **Homestead Valve Mfg. Co.**, Hypressure Jenny Div., P. O. Box 84, Coraopolis, Pa.

For more details circle NED-633 K3 on enclosed inquiry slip

FURNACE CONTROL
combination fan and limit type

Featuring a spiral bimetal unit, type FAL-20A combination furnace fan and limit control has an overall depth of less than 2 in., giving a compact mounting between heat exchanger and control panel. Scale settings are visible through a Lucite dial, and the unit has adequate space for internal wiring. The housing has a jet black baked crinkle finish, and measures 5¼-in. wide, 3½-in. high and 1¾-in. deep. Made by **Acro Mfg. Co.**, Crise Controls Div., 2042 E. Main St., Columbus 16, O.

For more details circle NED-634 K3 on enclosed inquiry slip

POLYETHYLENE DIPPING BASKET
light, strong and chemical resistant

Of gas welded construction, Agilene polyethylene dipping basket is lightweight, unbreakable and completely inert to chemical attack by acids, alkalies and other corrosive inorganic solutions up to 160° F. Basket shown is made of ⅜-in. Agilene plate and measures 20 in. long, 12 in. wide and 14 in. deep. Handle is of Agilide unplasticized polyvinyl chloride. Made by **American Agile Corp.**, Dept. E, P. O. Box 168, Bedford, O.

For more details circle NED-635 K3 on enclosed inquiry slip

Speed Production... Automatically with

T-J RIVITORS

Boost production . . . save labor in aircraft, automotive, farm machinery, stampings of all kinds . . . with T-J Rivitors! Automatically feed and set solid rivets. Electrically-powered Rivitor sets 1/16" to 1/4" diam. solid rivets up to 7/8" long. Air-powered Rivitor sets aluminum alloy rivets up to 1/4" diam. or steel rivets up to 1/8" diam. and up to 3/4" long. Throat depths 8" to 36". Write for bulletins 646 and 847. The Tomkins-Johnson Co., Jackson, Mich.

T-J Rivitor used for automotive clutch plate assembly. Does four-fold job—assembling, setting, inspecting, ejecting.

37 YEARS EXPERIENCE T-J

TOMKINS-JOHNSON

RIVITORS AIR AND HYDRAULIC CYLINDERS CUTTERS CLINCHORS

For more details circle NED-636 K3 on enclosed inquiry slip

NEW JABSCO PORTABLE SELF-PRIMING MOTOR-PUMP UNIT

Weighs only 29 lbs.
List Price $58.50

Jabsco announces the immediate availability of the outstanding Model 2187 Portable Motor-Pump Unit, *with capacity of 600 GPH at 10′ head.* Satisfied users find this versatile unit solves many pumping needs in industrial, farming, plumbing and marine uses. Model 2187 pumps coolants, circulates and transfers liquids, returns spilled liquids to process, drains cellars and sumps, pumps waste water to sewer, pumps out flooded basements, cesspools, and many other vital uses. Model 2187 is equipped with a close-coupled Jabsco bronze Pump with mechanical seal. Ports are threaded for standard ¾″ external garden hose connections, with ½″ IPS optional upon request. Heavy duty capacitor type ¼ HP Wagner electric motor with overload protector powers the unit. Motor is rated at 1725 RPM, 60 cycles—115 volts A.C. Comes with 6 ft. cord with ground wire and plug. Form-fitting handle folds away for easy storage. Also available at additional cost, D.C. motor units, 32 volt and 110 volt. Model 2187 is ready for instant use, and requires no additional equipment. No lubrication is required, no contamination of liquid pumped. Instantly self-priming with dry suction lifts to 15′, up to 25′ primed. For complete information, write **Jabsco Pump Company,** 2031 North Lincoln Street, Burbank, California. *Advt.*

For more details circle NED-637 K3 on enclosed inquiry slip

Get Wide Selection!

Whether you need open, drawout, or stationary enclosed units . . . with remote or local switching . . . there's an Allis-Chalmers low voltage air breaker for the job. These breakers are insensitive to shock and vibration under normal conditions and can be applied in any location.

Ratings are available to meet all low voltage applications. Interrupting capacities 25,000 and 50,000 amperes; continuous currents 35 to 1600 amperes; maximum voltage 600 volts, 25 to 60 cycles.

Get complete specifications from an Allis-Chalmers district office, or write Allis-Chalmers, Milwaukee 1, Wis.

A-4121

ALLIS-CHALMERS AC

For more details circle NED-638 K3 on enclosed inquiry slip

McGILL® Grounded Portable lamp guards . . .

. . . offer 5 big advantages!

1. Safety, convenience and dependability of a completely grounded portable of unsurpassed quality.
2. Approved 3-wire convenience outlet.
3. Screw shell .006" heavier than standard.
4. Levolier Switch and socket assembly.
5. Impact resisting molded Phenolic handle.

All models available as Service Light with 16-35JT red thermoplastic cord. Also without switch and outlet.

Send for Catalog No. 49-A today!

McGILL® electrical specialties

McGILL MANUFACTURING CO., INC. 151 N. CAMPBELL ST. VALPARAISO, INDIANA

For more details circle NED-639 on enclosed inquiry slip

STANDARDIZE WITH "OFF THE SHELF GEARS and REDUCERS"

OHIO STOCK DISTRIBUTORS

You make no mistake when you include an Ohio Gear Distributor in your engineering. You will find he fits into your production plans, and can save you time and money, too! Call him!

DISTRIBUTORS AND REPRESENTATIVES

*Akron 11, Ohio
Hardware & Supply Co.
*Baltimore 2, Md.
L. A. Benson Co., Inc
*Brooklyn 6, N. Y.
(Gears) Northside Leather Belting Co.
*Buffalo, N.Y.
*S. H. Pooley Belting Co.
F. E. Allen Co.
*Chicago, Ill.
Apex Power Equipment Co.
Schrade-Batterson Co.
*Cincinnati 14, Ohio
Metzger Machine Co.
*Cleveland, Ohio
J. A. Shomer Co.
Ohio Gear Co.
*Detroit 3, Mich.
Abrasive and Supply Co.
*Erie, Penn.
Cohen Industrial Supply
*Findlay, Ohio
Bearing & Transmission Co.
*Grand Rapids 2, Mich.
F. Raniville Co.
*Hagerstown, Md.
Hagerstown Equip. Co., Inc.
*Hoboken, New Jersey
(Gears) Crown Industrial Sup.
Houston 3, Texas
Behring's Bearing Service, Inc.
*Indianapolis 2, Indiana
A. R. Young Company, Inc.
*N. Kansas City 16, Missouri
Seeco Engr. & Supply Corp.
*Los Angeles 1, Calif.
J.W. Minder Chain & Gear Co.
Louisville 2, Ky.
Alfred Halliday
*Massillon, Ohio
Hardware & Supply Co.
*Memphis 2, Tenn.
Memphis Bearing & Supply Co.
Milwaukee 11, Wisc.
A. F. Korf Co.
*Minneapolis 4, Minn.
Industrial Supply Co., Inc.
*Muskegon, Mich.
Lakeshore Machinery & Supply Co.
New Haven, Conn.
George G. Fragst
*New Orleans, La.
*(Gears) R. J. Tricon Co., Inc.
*(Reducers) Woodward Wight & Co., Ltd.
*New York, N. Y.
*(Reducers) Patron Trans. Co., Inc.
*(Gears) Atlantic Transmission & Gear Sales, Inc.
*Paterson 4, N. J.
(Gears) Bernstein Bros., Inc.
*Philadelphia, Pa.
*Robert L. Latimer Co.
*Rothman Belting & Equip. Co.
*Piqua, Ohio
Bornell Supply Co.
*Pittsburgh 30, Pa.
Standard Machinists Supply Co.
*Portland 14, Oregon
J.W. Minder Chain & Gear Co.
*Rochester 14, N.Y.
H. M. Cross & Son
*San Francisco 3, Calif.
Adam Hill Company
*St. Louis 4, Missouri
The Essmueller Co.
*Syracuse, N. Y.
U. & S., Inc.
*Toledo 12, Ohio
G. & J. Bearings & Supply Co.
IN CANADA, *Montreal, Quebec,
John Braidwood & Sons, Ltd.
*Stocks Carried.

ESTABLISHED 1915
THE OHIO GEAR COMPANY
1320 EAST 179th STREET • CLEVELAND 10, OHIO

OHIO GEARS

For more details circle NED-640 K3 on enclosed inquiry slip

If you have a labeling problem ordinary labels can't solve...use AVERY Kum Kleen self-adhesive LABELS

...the tough ones are our specialty

...where other types of labels are found "wanting"...or when you need to substitute an attractive pressure-sensitive label for a costly nameplate... Avery Kum-Kleen labels are the *best* solution to your problem!

...and so are the other kind..

...where you want *faster* labeling... improved appearance...labels that won't pop, curl or peel...or those the housewife can remove without soaking or scraping...there's no substitute for an Avery Kum-Kleen label!

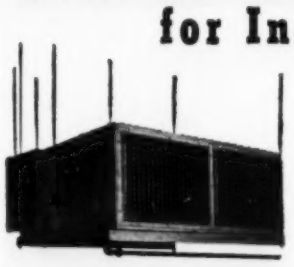
faster • easier • more economical

Patented Avery dispensers...manual or electric... feed die-cut *pressure-sensitive* labels off roller tape, ready to be LAID ON any clean, smooth surface. No moistening...no sticky fingers. Where can YOU use these labels in YOUR business? Write today for free samples, case histories and prices.

AVERY ADHESIVE LABEL CORP., DIV. 102
117 Liberty Street, New York 6 • 608 South Dearborn Street, Chicago 5
1616 So. California Ave., Monrovia, Cal. • Offices in Other Principal Cities
Originators of Pressure-Sensitive Labels

For more details circle NED-641 K3 on enclosed inquiry slip

Controlled Humidification for Industry



Bahnson Type BA-2 Self-Contained Humidifier

Requires only water supply and electrical connection

SOLVES YOUR DRY AIR PROBLEMS AT MINIMUM OPERATING COST!

- HIGH CAPACITY—Evaporates up to 18 gph.
- AUTOMATICALLY CONTROLLED at any desired relative humidity.
- NEEDS NO pump, duct, compressed air, steam or floor space.
- EFFICIENT centrifugal atomization of ordinary city water.
- FLEXIBILITY—Can be used for heating as well as humidifying and filtering.
- MOIST AIR delivered in controlled pattern without droplets.
- EASY TO INSTALL—Just uncrate and suspend from ceiling.
- TROUBLE-FREE—Guaranteed by America's largest maker of industrial humidification equipment.

For positive humidity control for one room or your entire plant, check Bahnson's complete line of humidification equipment. Write today.

FOR TRULY DEPENDABLE LOW-COST HUMIDIFICATION
Bahnson Company
ENGINEERS AND MANUFACTURERS
WINSTON-SALEM, N. C.

For more details circle NED-642 K3 on enclosed inquiry slip

HYDRAULIC SPRING utilizes fluid compressibility

Of the tension type, this Hydra Spring utilizes the compressibility of Comproil fluids and provides capacity up to 7000 lb and strokes to 2⅞ in. Units are compact, illustration showing one with the above rating which measures 2 in. thick, 5 in. wide and 6¼ in. to centerline of fitting. This feature permits an unusually high capacity spring-action load to be provided in a small area. Compressible fluids can be varied to give different ratings, and are contained in reservoirs which can be located independently of the spring unit. Made by **Wales-Strippit Corp.**, 363 Payne Ave., North Tonawanda, N. Y.

For more details circle NED-643 K3 on enclosed inquiry slip

PIPE JOINTS provide electrical insulating barrier without lowering carrying capacity

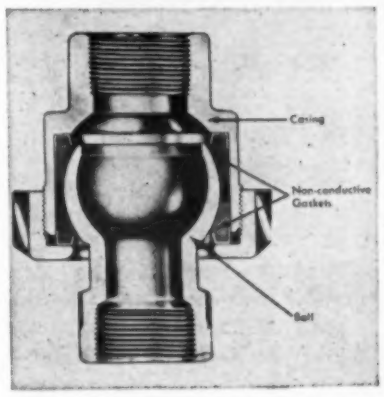


Illustration shows how this pipe joint provides an electrical insulating barrier in a pipe without interfering with its capacity for conveying steam, water, chemicals or gases. Design prevents metal-to-metal contact, promoting safety and preventing current waste and electrolytic pitting or corrosion. Dry, the joints have an electrical resistance of approximately 100,000,000 ohms. Used with water, resistance depends on the pH acidity of the water. For a single joint, used with steam, 50 to 60 v is recommended as a safe maximum.

Standard joints are available in malleable iron for pipe sizes from ¼ to 6 in. with threaded ends. Temperatures to 425° F, steam pressures to 300 psi and hydraulic pressures to 2000 psi can be accommodated. Steel and alloy joints are also available. Typical applications are found in piping lines to electrolytic plating, cleaning and anodizing tanks. Made by **Barco Mfg. Co.**, Dept. J-32, 500 Hough St., Barrington, Ill.

For more details circle NED-644 K3 on enclosed inquiry slip

FOR EFFECTIVE SPRAYING AT LOWER COST

remember final control is the SPRAY NOZZLE you use!

In design...choose the Spray Nozzles that give you proper performance, with exact spray pattern, impact, spray angle and capacity. In application ... be sure the nozzles as supplied are produced to close tolerances. Metallurgically, make certain the spray nozzles fit your use.

With Spraying Systems you can be sure of spray nozzles to meet all three requirements. *Let Spraying Systems Co. recommend Spray Nozzles to meet your needs best.*

YOUR GUIDE TO SPRAY NOZZLE SELECTION
Spraying Systems Co. Catalog No. 22... 32 pages, with complete performance data. Also write for Catalog 23... Pneumatic Atomizing Nozzles.

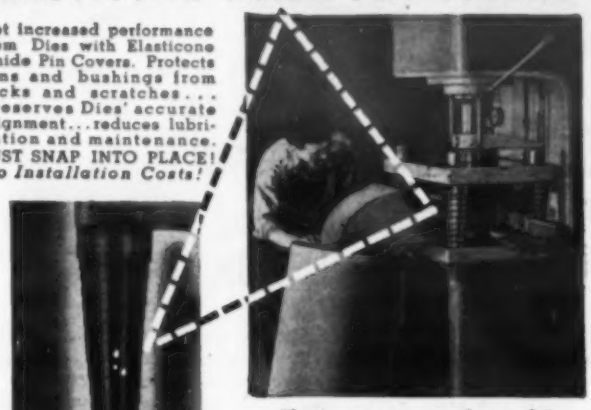
SPRAYING SYSTEMS CO.
3211 RANDOLPH STREET • BELLWOOD, ILLINOIS

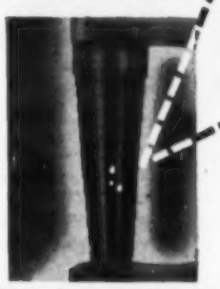
FOR EFFICIENT SPRAYING MAKE SURE THE NOZZLE IS RIGHT

For more details circle NED-645 K3 on enclosed inquiry slip

DIE LIFE INCREASED 25% with ELASTICONE GUIDE PIN COVERS

Get increased performance from Dies with Elasticone Guide Pin Covers. Protects pins and bushings from nicks and scratches... preserves Dies' accurate alignment...reduces lubrication and maintenance. JUST SNAP INTO PLACE! *No Installation Costs!*





Investigate today the many new cost-saving engineering advantages in die designing with Elasticones.

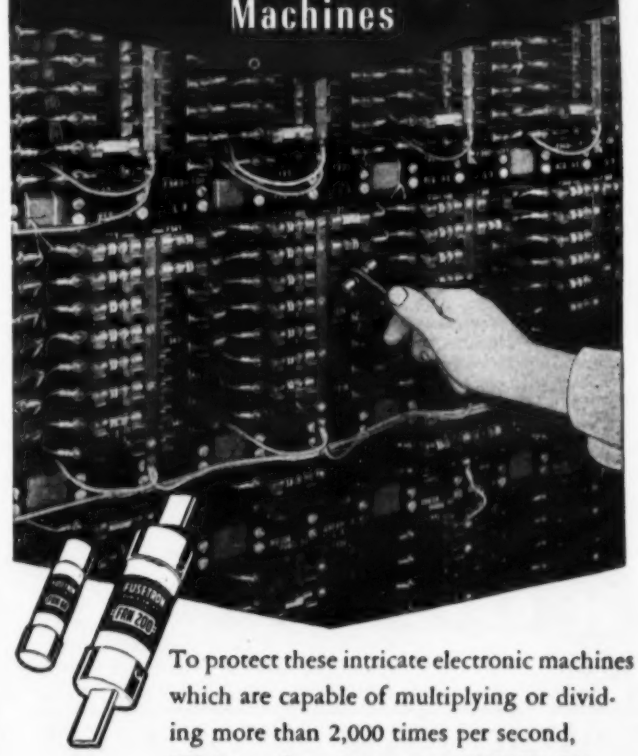
Elasticones are manufactured in stock sizes. Specify O.D. of bushing and full open height of set when ordering.

Write for full information and literature.

CENTRAL
2208 EAST HUNTINGDON ST. PHILA. 25, PA.
CENTRAL SAFETY EQUIPMENT COMPANY

For more details circle NED-646 K3 on enclosed inquiry slip

More than 400 FUSETRON and BUSS Fuses are used in IBM's Electronic Data Processing Machines



To protect these intricate electronic machines which are capable of multiplying or dividing more than 2,000 times per second, IBM uses from 400 to 500 FUSETRON and BUSS fuses. Where surge currents might cause ordinary fuses to blow needlessly, FUSETRON dual-element fuses with long time lag are used. Where even a short-lived surge might cause damage to the delicate parts, fast-opening BUSS single-element fuses protect.

***You Can Have* the Same BUSS Dependability and Accuracy in Your Plant . . .**

Industrial and commercial sizes of FUSETRON dual-element fuses are made with the same precision that is demanded by this ultra-modern IBM equipment. They can be used throughout your entire electrical system to give a degree of protection obtained with no other device . . . and at a surprisingly low cost.

FUSETRON
TRUSTWORTHY NAMES IN ELECTRICAL PROTECTION
BUSS

For more information write

BUSSMANN MFG. CO., University at Jefferson, St. Louis 7, Mo. (Division of McGraw Electric Co.)

For more details circle NED-647 K3 on enclosed inquiry slip

For your product-improving "TOUCH OF GOLD" —polish with ALUNDUM* Abrasive

Count on Norton ALUNDUM abrasive grain for extreme hardness and toughness, strict uniformity in size and shape, with a maximum of fast polishing, sharp-cutting edges. And its high capillarity means increased polishing wheel life and efficiency.

These and other advantages assure better polishing — your value-adding, cost-cutting "Touch of Gold" — every time you use ALUNDUM Abrasive.

YOUR NORTON DISTRIBUTOR can make quick deliveries, in any required quantity, from complete stocks in key cities. See him, too, about expert aid in polishing problems from your Norton Abrasive Engineer. Or write Norton Company, Worcester 6, Mass. Distributors in all principal cities. *Export:* Norton Behr-Manning Overseas Incorporated, Worcester 6, Mass.

NORTON ABRASIVES
Making better products to make other products better

*Trade-Mark Reg. U. S. Pat. Off. and Foreign Countries G-252

▲ For more details circle **NED-648 K3** on enclosed inquiry slip ▲

HOBBS
EST. 1882
TANGLE-PROOF
LOCK WASHERS

You can *depend* on Hobbs spring lock washers to meet all job requirements and government specifications. Available in high carbon steel, stainless steels, silicon and phosphor bronze, and all types of platings.

HOBBS COTTER PINS are available in steel, brass, stainless steel, and monel in extended prong (Loxit) and hammer-lock (HobLok) types. HobLok cotter pins lock themselves when hit with hammer!

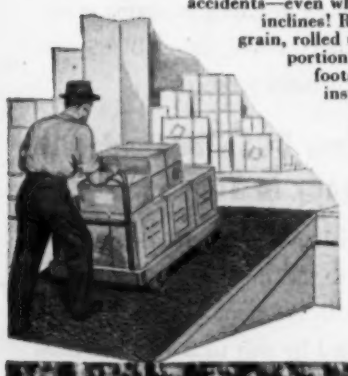
Write now for Hobbs lock washer and cotter pin price lists!

HOBBS MANUFACTURING CO.
Fastener Division
16 SALISBURY ST., WORCESTER 5, MASS.
EST. 1882

▲ For more details circle **NED-649 K3** on enclosed inquiry slip ▲

THIS NON-SLIP FLOOR PLATE PAYS FOR ITSELF IN LOWER INSURANCE RATES!

DOWN go accident rates *and* insurance premiums when you install A.W. ALGRIP Abrasive Rolled Steel Floor Plate. In plant after plant, ALGRIP has ended slipping accidents—even when wet or oily—even on steep inclines! Rough, tough "grinding-wheel" grain, rolled uniformly into ALGRIP's upper portion, puts non-skid safety in every footstep. And resultant savings on insurance premiums pay for your ALGRIP installation. Learn the full story of *savings from safety* today. Send for the facts about tough, fire-and-breakage-resistant, non-slip ALGRIP Safety Floor Plate. The handy coupon brings you our new Booklet on accident prevention.



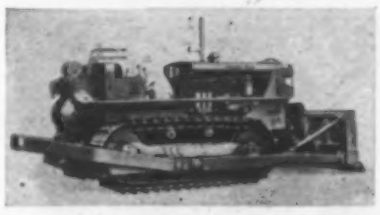
A.W. ALGRIP *Abrasive Rolled Steel Floor Plate*
ALAN WOOD STEEL COMPANY
CONSHOHOCKEN, PA.

I want to know more about savings from safety. Send me your ALGRIP Booklet AL-6.

*Name*_____
*Company*_____
*Address*_____
*City*_____ *Zone*_____ *State*_____

▲ For more details circle **NED-650 K3** on enclosed inquiry slip ▲

PUSHER TRACTOR
for heap loading large scrapers

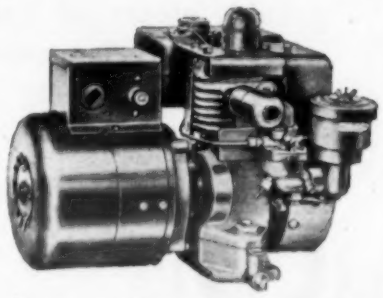


A modified D8 tractor, No. 8S bulldozer and No. 25 cable control comprise this pusher tractor capable of heap loading large scrapers. Special features include Caterpillar D13000 engine, with 150 drawbar-hp at 1200 rpm, weight of 50,025 lb for balance and good traction; bulldozer and cable controls for inline pushing action and clean up of cut; transmission for the most suitable pushing speed and oil-type clutches for long life. Tandem pusher frame attachment permits transfer of power from one tractor to another through track roller frame, avoiding destructive stresses imposed on lead tractor final drive. Made by **Caterpillar Tractor Co.,** Equipment St., Peoria 8, Ill.

▲ For more details circle **NED-651 K3** on enclosed inquiry slip ▲

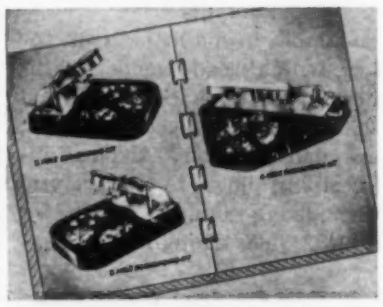
ELECTRIC PLANT
improved model is more portable

Completely redesigned, model 550 electric plant is 5 lb lighter, 2½ in. shorter and 6 in. lower than previous unit, yet develops the same 500 to 550 w, 110-120 v ac. Being more portable, plant is practical for construction projects, stand-by service, industrial applications, and for lighting or powering tools in remote areas. Weight is only 73 lb. Plant has over-sized, self-excited, self-regulated generator providing good voltage regulation. Convenient plug-in receptacle is on generator. One-cylinder, four-cycle engine is available with either manual or electric starting. Made by **Universal Motor Co.,** 352 Universal Dr., Oshkosh, Wis.



▲ For more details circle **NED-652 K3** on enclosed inquiry slip ▲

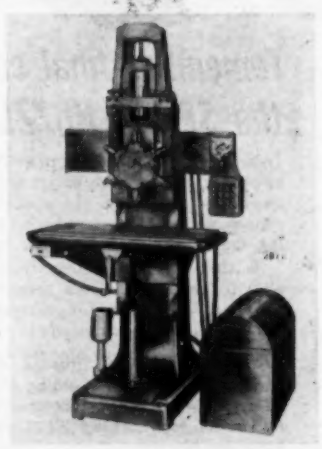
PLASTIC BINDING KITS
to prepare loose-leaf presentations



Loose-leaf convenience of plastic binding is provided by three and four punch plastic binding kits for preparation of presentations, reports, inventory sheets, advertising, etc. Kits are supplied with 150 plastic tubes, and additional tubes in diameters of 3/16 up to 1 in. are available. All fit the same slots punched by all models of Tauber punches. Tubes can be inserted by hand with great speed. Machine punches about 15 sheets at a time, depending on thickness. The three and four punch kits are priced at $16.90 and $29.90, respectively. Made by **Tauber Plastics, Inc.,** 200-S Hudson St., New York 13, N. Y.

▲ For more details circle **NED-653 K3** on enclosed inquiry slip ▲

TURRET DRILL
six-spindle automatic machine

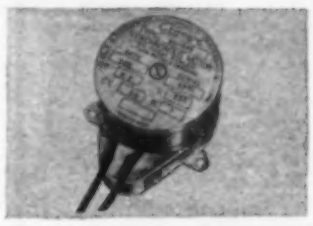


Featured on the model 2BH six-spindle automatic turret drill is an infinitely variable hydraulic feed which can be manually controlled for automatic operations. More than one machine can be operated by one operator. Twelve preselected spindle speeds are available for each spindle. Table travel is 19 in. and depth stops can be preset for each spindle. Floor space required is 60 x 51 in. Made by **Burg Tool Mfg. Co.,** Dept. NE, 3743 Durango Ave., Los Angeles 34, Calif.

▲ For more details circle **NED-654 K3** on enclosed inquiry slip ▲

Cramer TIMING DEVICES

SYNCHRONOUS TIMING MOTORS STOP AND START *INSTANTLY!*



CHECK THESE OUTSTANDING *FEATURES...*

- Instantaneous Response
- 30-Inch Ounces Torque at 1 R.P.M.
- Runs Only at Synchronous Speed
- Runs Equally Well in Any Position
- Controlled Rotation or Dual Rotation
- Replaceable Coils
- One- or Two-Way Friction

Write for Cramer Timing Device Catalog or specify Bulletin No. 10A for complete information on the Model SX Motor.

the R. W. CRAMER COMPANY
BOX 28, CENTERBROOK, CONN.

SCR53

▲ For more details circle **NED-655 K3** on enclosed inquiry slip ▲

Yes, We Can Prove It!

You too, can get *High Speed Action* on your assembly jobs—
Greater Accuracy at Far Lower Cost!

by Using these Modern Mechanical Helpers
DETROIT POWER SCREWDRIVERS *and Motorized* HOPPER UNITS

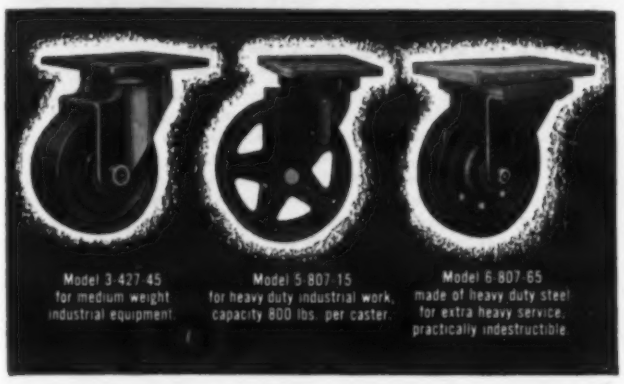
These popular, advanced machines offer a fast, dependable method of assembly definitely proved indispensable in other plants . . . In replacing slow, tedious manual handling, it has boosted production substantially, sustaining uniform results by eliminating human error . . . Whatever your feeding and assembling operations may be, our engineering experts will analyze your problem and come up with a practical solution . . . Give us details . . . Send sample assembly.

DETROIT POWER SCREWDRIVER CO.
2819 W. FORT ST. DETROIT 16, MICH.

▲ For more details circle **NED-656 K3** on enclosed inquiry slip ▲

FAST... EFFICIENT materials-handling with Colson casters

There's a COLSON Caster designed to meet every industrial materials-handling requirement—*exactly*. Old, bumpy hard-to-handle equipment can be restored to its original efficiency quickly and economically with COLSON Casters. Other COLSON materials-handling equipment includes hand trucks, barrel and drum trucks, platform trucks and lift-jack systems. Write us or consult the yellow pages (under "Casters" or "Trucks, industrial") for the COLSON office near you.



Write for new catalog "COLSON Trucks and Casters"

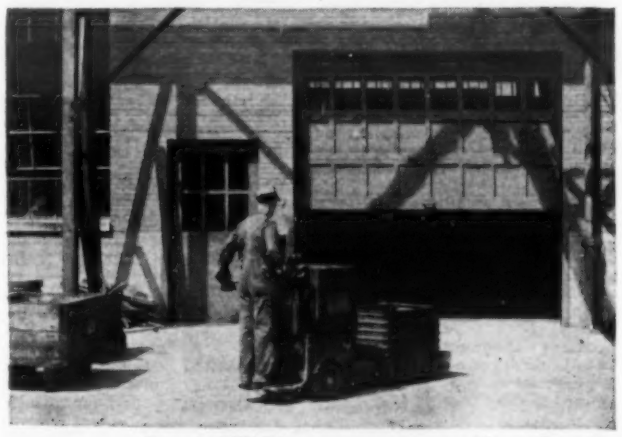
THE COLSON CORPORATION
ELYRIA, OHIO
CASTERS · LIFT-JACK SYSTEMS · INDUSTRIAL TRUCKS

▲ For more details circle **NED-657 K3** on enclosed inquiry slip ▲

BARBER COLMAN

Barcol® OVERdoors

for rugged industrial use



Barcol OVERdoors operate smoothly and easily because twin torsion coil springs are engineered to balance the exact weight of the door, glass, paint, and every ounce of plated hardware. Add the patented Barber-Colman cam closing action, and your door is sure to be weather-tight yet easy working. To speed plant traffic and save heat, use Barcol electric operators with pull cords or convenient wall switches. Your Barcol distributor sells, installs, guarantees, and services. Look under "Doors" in phone book.

BARBER-COLMAN COMPANY, DEPT. S310, ROCKFORD, ILLINOIS

▲ For more details circle **NED-658 K3** on enclosed inquiry slip ▲

SHOCK ABSORBERS FOR ELECTRICAL ASSEMBLIES

THOMPSON shock absorbers feature angular as well as vertical movement to permit maximum vibration absorption. Threaded for ease of installation, these spring-loaded units provide shockproof mounting for lighting fixtures, meters, fans, unit heaters, motors, instrument panels, process controls, etc.

THOMPSON shock absorbers have only four component parts: malleable cast iron bell-shaped body, open spring plate, stem and powerful steel spring. All parts are treated for corrosion resistance.

Light and heavy-duty models are available in varying load capacities to a maximum of 80 pounds.

For complete data, write today for Catalog No. 58

THE THOMPSON ELECTRIC CO.
1138 POWER AVENUE • CLEVELAND 14, OHIO

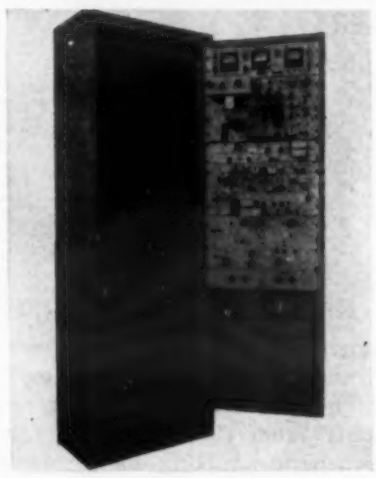
▲ For more details circle **NED-659 K3** on enclosed inquiry slip ▲

SCALPING SCREEN deck handles large boulders

These heavy duty scalping screens for fast scalping of ore, rock and similar materials feature massive decks formed with wide flanged H-beams and deep section ship channels to handle high impact of large boulders. Enclosed floating vibrator mechanism allows high capacity screening of sticky, dusty ores. Screen movement is adjusted by varying amount of segmental weights, and automatic controls limit motion during acceleration and deceleration. Large helical springs isolate vibration from foundations, concentrating motion in the wide deck. Bearings are readily accessible, and hydraulic removal is possible. Decks are furnished with grizzly or heavy perforated plates with riding bars. Made by **Link-Belt Co.**, Dept. NED, 307 N. Michigan Ave., Chicago 1, Ill.

▲ For more details circle **NED-660 K3** on enclosed inquiry slip ▲

POWER-LINE CARRIERS feature close channel spacing



For power system relaying, telemetering, supervisory control and voice communication, type FD power line carrier equipment offers close channel spacing, as a result of highly selective receiver filters and crystal frequency control. Frequency ranges are from 40 to 90 and 90 to 200 kilocycles. Assemblies operate either from station battery or alternating current. Made by **Westinghouse Electric Corp.**, Dept. TP-285, 2519 Wilkens Ave., Baltimore 3, Md.

▲ For more details circle **NED-661 K3** on enclosed inquiry slip ▲

Hydraulic Oil Selection

Vickers Inc.—Recommendations for hydraulic oil selection and basic hydraulic system maintenance on machine tools and other industrial machinery are subject of 16-page illustrated bulletin 1300-S. Entitled "Hydraulics for Industrial Machinery," it reviews characteristics of oils, hydraulic system operation under normal and extreme temperature and humidity conditions, and general maintenance procedures.

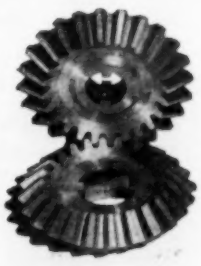
▲ For more details circle **NED-662 K3** on enclosed inquiry slip ▲

D.O. James Established 1888

GEARS For INDUSTRY

SINCE 1888 . . . We have been making many types and sizes of gears for industry. Vast plant facilities of the most modern gear cutting equipment assure capable handling of your *production* or *special* gear requirements.

HELICAL and BEVEL GEARS—From 1" to 60" in diameter and from 24 DP to 1½ DP.
SPUR GEARS—Size range from ¾" to 150" in diameter. 32 DP to ¾ DP.
HERRINGBONE GEARS—Made from 1" to 60" in diameter and from 10 DP to 1½ DP.
SPIRAL BEVEL GEARS—Made from 1" to 30" in diam. and 24 DP to 1½ DP.
WORM GEARS—Made from 1" to 100" in diam. and from 24 DP to 1 DP.



YOUR GEAR INQUIRIES WILL RECEIVE IMMEDIATE ATTENTION
D.O. JAMES GEAR MANUFACTURING COMPANY
1140 W. MONROE ST. • CHICAGO 7, ILL.

▲ For more details circle **NED-663 K3** on enclosed inquiry slip ▲

New! Low-Cost! Wide-Range!

VARIABLE Speed Sheaves

Easily Attached to Any Machine

1/15 TO 15 HP.
RATIOS UP TO 8:1

● Simple, sturdy Speed Selector Sheaves are applied to any machine in only a few minutes . . . giving you wide-range speed control at extremely low cost. You get wide speed variations with standard V-belts, since two variable pitch sheaves are used. Eliminates bulky sliding motor bases, movable jackshafts and wide, high-cost special V-belts.

• Standard V-belts • Automatic belt alignment
• Fixed shaft centers • LOW COST

Write FOR FREE BULLETIN

SPEED SELECTOR INC
118-N NOBLE COURT • CLEVELAND 13, OHIO

▲ For more details circle **NED-664 K3** on enclosed inquiry slip ▲

AUTOMATIC SCRAP REMOVAL ON ANY MACHINE TOOL WITH CHIP-TOTE

The May-Fran Chip-Tote continuously removes turnings, borings and chips from operating machine tools. This unit eliminates machine down-time for manual scrap removal . . . assures continuous full-production operation of machine tool . . . gets rid of uncontained scrap around machine which cuts floor and tires.

Chip-Totes can be installed as part of the original equipment or they can be incorporated as an integral operating unit on almost any machine tool currently in use.

The Chip-Tote utilizes May-Fran Hinged-Steel Conveyor Belting which is perforated to permit coolant drainage. Width, length and angle of incline can be modified to meet specific requirements. Speed of operation can be synchronized with the metal-removing capacity and rate of coolant flow of machine to which Chip-Tote is attached.

Let a Chip-Tote solve your production problems . . . automatically and efficiently.

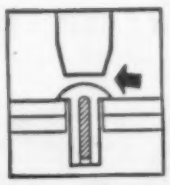
Write today for Chip-Tote catalog.

Designers, Builders of Handling Systems 1408-MF

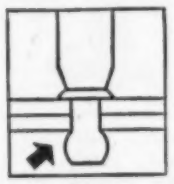
MAY-FRAN ENGINEERING, INC.
1711 CLARKSTONE ROAD • CLEVELAND 12, OHIO

▲ For more details circle **NED-665 K3** on enclosed inquiry slip ▲

DU PONT EXPLOSIVE RIVETS
offer simplicity, speed and economy in fastening work



1. Touch head of Explosive Rivet with heated Du Pont Riveting Iron. (Note tiny explosive charge in Rivet shank.)



2. Almost instantly . . . charge expands, forming a barrel-shaped head on shop end of Rivet that sets it in place.

Quick, economical fastening's a "cinch" when you use Du Pont Industrial Explosive Rivets! Set up to 25 a minute on "blind" or open-seam jobs (no after-finishing needed). Work only from head side of Rivet without bucking bar. You produce durable jobs, parts are securely fastened—and neater, because Explosive Rivets won't damage paint or warp metal. Wide grip range permits stocking fewer sizes . . . cuts inventory costs. Explosive Rivets are available in aluminum alloy, brass or nickel-plated brass . . . brazier or countersunk heads. For informative booklet, contact nearest Du Pont Refinish Service Warehouse, or write: E. I. du Pont de Nemours & Co. (Inc.), Explosives Dept., Wilmington 98, Delaware.

DU PONT *Hi-Speed* INDUSTRIAL EXPLOSIVE RIVETS

A Product of Du Pont Explosives Research

DU PONT — Better Things for Better Living . . . through Chemistry

▲ For more details circle NED-666 K3 on enclosed inquiry slip ▲

---

for thorough dust collection at the lowest cost

specify **dustube**® COLLECTORS

The cost of a dust collection system is not a measure of its efficiency. Dustube Collectors provide the most thorough dust removal, yet are low in cost, inexpensive to operate and simple to maintain. Many users have reported that "They are the least expensive of all dry type collectors to operate and maintain."

The 10 operating advantages that make this type of performance possible are described in Catalog 372. Send for a copy today.

American WHEELABRATOR & EQUIPMENT CORP. 508 S. Byrkit St., Mishawaka 8, Ind. — **dustube**® COLLECTORS

---

for the most efficient dust collection money can buy

specify **dustube**® COLLECTORS

Dustube Collectors remove dust with virtually 100% efficiency handling the heaviest dust creating operations and the finest atmospheric dust with equal ease. The newly developed Dustube Ultra Filtration principle removes even the dust you can't see. It removes all the minute particles that are injurious to precision machinery and processes.

The 10 operating advantages that make this type of performance possible are described in Catalog 372. Send for a copy today.

American WHEELABRATOR & EQUIPMENT CORP. 508 S. Byrkit St., Mishawaka 8, Ind. — **dustube**® COLLECTORS

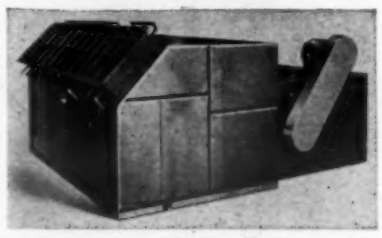
▲ For more details circle NED-667 K3 on enclosed inquiry slip ▲

PORTABLE CONVEYOR
has screw lift and lowering device

Power operated safety screw lift and lowering device on this portable Hi-Lo conveyor will bring it to any angle practical for stacking, storing, loading and unloading or floor to floor movement of bags, boxes and cartons. Conveyor operates close to floor and has no obstruction at loading end, facilitating pick ups. Removable rubber cleats every 60 in. on 3-ply corrugated belt prevent tearing of packages, and reversible motor allows instant change of direction. Unit moves easily on ball bearing swivel casters, yet anchors firmly to floor when in use. It folds in half for storage. Four sizes are available. Made by **Frank A. Kremser & Sons, Inc.**, 3435 N. Fifth St., Philadelphia 40, Pa.

▲ For more details circle NED-668 K3 on enclosed inquiry slip ▲

AIR CONDITIONERS
for multi-zone applications



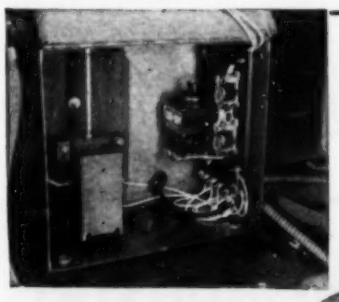
For applications where independent and variable cooling and heating loads are encountered, line of multi-zone air conditioners provides both cooling and heating from a single unit to any number of separate areas, each with individual control. Four models are available, designed to serve up to 16 zones and ranging in capacity from 7500 to 18,000 cfm. Through the use of separate mixing dampers air volume distributed to each zone remains substantially the same at all times. It is even possible to heat one zone and cool another simultaneously. Automatic temperature control can be incorporated if desired. Made by **United States Air Conditioning Corp.**, 3316 Como Ave. S.E., Minneapolis 14, Minn.

▲ For more details circle NED-669 K3 on enclosed inquiry slip ▲

Electronic Timer

Sciaky Bros. Inc.—For accurate short interval control of mechanical and electrical operations, electronic timers are described in bulletin 315-10. Many ranges are available from 0 to 24 seconds, and bulletin gives complete specifications for five typical models, together with general design and operation features.

▲ For more details circle NED-670 K3 on enclosed inquiry slip ▲



"Years of service—and over a million operations a year"
D. W. Onan & Sons Inc.

AGASTAT
light . . . versatile
TIME DELAY RELAYS

AGASTATS are used by Onan to prevent starting of their standby plant on momentary power failure, to prevent stopping of the plant until power has returned for a given time, and on some lugging presses that operate over a million times a year. Onan reports several years of service with a minimum of attention.

AGASTATS are solenoid actuated and pneumatically timed. They are light, compact, dustproof and can be furnished to operate mounted in any position. There is an AGASTAT model that is right for your needs.

Write for Bulletin Dept. A2-105

AGA

Division of Elastic Stop Nut Corporation of America
1027 Newark Avenue, Elizabeth 3, New Jersey

▲ For more details circle NED-671 K3 on enclosed inquiry slip ▲

AUTOMATIC PROTECTION OR CONTROL for your heating process

. . . WITH ALNOR PYROTAC

Here's a simple, low-cost way to obtain *AUTOMATIC PROTECTION* against damage due to excessive temperatures . . . safeguard your investment in heating equipment and materials in process. This precision-built instrument constantly indicates temperature of the heated equipment and sounds an alarm and/or shuts down the heated circuit at a safe, pre-set temperature. It may also be used as a *CONTROLLER* on a process requiring shutdown upon reaching a final process temperature—such as ceramic kilns, molds, etc. Automatic thermocouple break protection assures safety if couple or extension wires should break.

Ask your Alnor representative for details on this sturdy, precise instrument. You'll find the price of less than a hundred dollars unusual for an instrument of this type. Write for bulletin that contains complete description and wiring diagrams of actual applications. Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle Street, Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

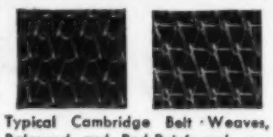
▲ For more details circle NED-672 K3 on enclosed inquiry slip ▲

FOR MEN WHO USE WIRE MESH BELTS!

Here's why leading manufacturers specify "Cambridge" wire mesh conveyor belts.

ACCURATE CONSTRUCTION—every step of the construction of your belt is carefully controlled so that the finished belt meets specifications for size, mesh count and mesh opening. Even the welds at the edge of the belt are specially inspected to give you maximum protection at this most vulnerable part of the belt.

RANGE OF SPECIFICATIONS—whether you're handling delicate lightweight loads, such as needle bearings, or heavy, bulky parts such as automotive springs, there's a Cambridge wire belt specification to meet your needs. Even processing through heat, cold or corrosive solutions is a snap when the proper metal or alloy is chosen for fabricating your belt.



Typical Cambridge Belt Weaves, Balanced and Rod-Reinforced, are widely used for many processes which can be combined with movement.

EXPERIENCED ENGINEERING SERVICE—the combination of trained engineers both in the Cambridge plant and on our Sales Staff is your assurance that the belt recommended for you is the right belt. Cambridge engineers can assist you in any phase of conveyor belt usage . . . conveyor design, plant layout, equipment specification, etc.

P.S. IF YOU DON'T USE WIRE MESH BELTS, you'll do well to find out how they cut costs and boost output by combining product movement with processing in your plant. For information write direct or call in your Cambridge field engineer. Look under "Belting, Mechanical" in your classified telephone directory for your Cambridge man.

FREE WIRE BELT MANUAL gives data on design, installations, construction. Write for your copy today.

The Cambridge Wire Cloth Co.

WIRE CLOTH | METAL CONVEYOR BELTS | SPECIAL METAL FABRICATIONS

Department C
Cambridge 10, Md.

OFFICES IN PRINCIPAL INDUSTRIAL CITIES

▲ For more details circle NED-673 K3 on enclosed inquiry slip ▲

The lowest costing lift truck you can buy, the Red Arrow features unusual ease of operation, speed and economy. Maintenance cost practically nil. Machined standardized parts and machined bolted frame . . . eliminate downtime. Pays for itself many times a year in time and manpower saved.
Send for Bulletin 252 Today.

LIFT TRUCKS INC., CINCINNATI 14, OHIO

▲ For more details circle NED-674 K3 on enclosed inquiry slip ▲

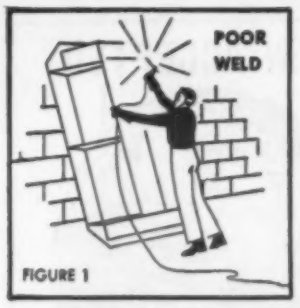


FIGURE 1

FIGURE 2

How Worthington Welding Positioners help your welders produce BETTER WELDS

When your welder has to climb over, prop, or flop the work, he's wasting time and can only obtain good downhand welding over a limited area (Figure 1). With a Worthington Welding Positioner, the work is quickly tilted or rotated automatically into position for correct downhand welding. Write for Bulletin 210D. Worthington Corporation, Plainfield, N. J.

Y.2.5

WORTHINGTON

Welding Positioners—Turning Rolls

▲ For more details circle NED-675 K3 on enclosed inquiry slip ▲

YOU GET **STEADY FLOW** WITH **SPO** AIR VIBRATORS

These low-cost units provide dependable hard-hitting vibration to keep bulk granular or powdered materials moving. SPO vibrators prevent jams in bins, hoppers and chutes . . . assure steady material flow at all times . . . eliminate production bottlenecks.

Long-lasting SPO vibrators incorporate a special corrosion-proof liner for full power starting, high speed operation and low air consumption. A complete range of types and sizes is available to meet all vibration needs.

SERIES 81

2460-S1

Write today for Bulletin 50 for complete details.

SPO INCORPORATED

6475 Grand Division Avenue • Cleveland 25, Ohio

▲ For more details circle NED-676 K3 on enclosed inquiry slip ▲

MILLIONS OF GALLONS OF LIQUIDS ARE ACCURATELY MEASURED EACH YEAR BY THESE . . .

. . . BOWSER XACTO METERS

Wherever precision measurement is essential to assure constant uniformity of product—control costs, or simplify handling of liquids—there you will usually find Xacto meters on the job.

Right now—in many plants of all types—Bowser Xactos are efficiently handling 662 different liquids.

It will pay you to consult with your nearby Bowser representative.

BOWSER, INC.

1381 Creighton Ave., Fort Wayne 2, Ind.

BOWSER Regional Offices • Atlanta • Chicago • Cleveland • Dallas • Kansas City • New York • San Francisco • Washington, D. C. • Hamilton, Ontario

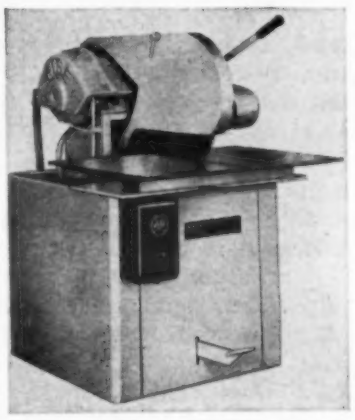
▲ For more details circle NED-677 K3 on enclosed inquiry slip ▲

LIGHT-DUTY PRESS BRAKES three models are available

Available in three sizes with capacities of 54 in. x 10 gage to 120 in. x 16 gage, series A light-duty press brakes are provided with 3-in. stroke and ram adjustment, 12-in. die space and a variable speed drive giving 20 to 50 strokes a minute. Construction is welded plate, and the bed is twin-plate to provide lateral rigidity, minimum deflection and a 1¼-in. slug clearance on multiple punching. Twin drive through a double back gear gives even power application over the length of the ram, which is motorized to facilitate adjustment, and friction clutch and band brake permit jogging and slipping to meet operating conditions. Ram can be tilted for tapered work. Made by **Dreis & Krump Mfg. Co.**, 7436 S. Loomis Blvd., Chicago 36, Ill.

▲ For more details circle NED-678 K3 on enclosed inquiry slip ▲

CUT-OFF SAW converts to gate-and-riser cutting



To adapt this heavy duty cut-off saw to gate and riser cutting, the foundry bed is attached, the cutting head is locked and the handle is removed. Reversing these operations reverts the saw to chop-stroke cutting for bars and shapes. Saw is powered by 7½ to 15-hp motors to permit use of 18 and 20-in. cut-off wheels. Also featured are large throat room, safety guard which covers entire wheel, foot-operated V-vise hold-down and heavy duty spindle bearings. Made by **Henry H. Wise Co.**, 945 Wilshire Blvd., Los Angeles 17, Calif.

▲ For more details circle NED-679 K3 on enclosed inquiry slip ▲

Industrial Filtration Equipment

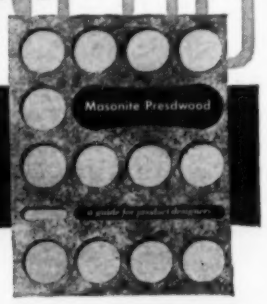
U. S. Hoffman Machinery Corp., Industrial Filtration Div.—8-page bulletin A-943 graphically presents the essential features and applications of company's ten basic types of industrial filtration equipment. These include disk, cartridge and pressure type filters, flotation units, vacuum stills, magnetic separators and oil conditioners. Capsule specifications are given for each unit.

▲ For more details circle NED-680 K3 on enclosed inquiry slip ▲

DESIGNERS

new free booklet tells all about

MASONITE PRESDWOOD



Better products, better production! New booklet tells how to gain both—through versatile Masonite Presdwood®. Gives properties—tells how to use the 44 types and thicknesses of this strong, dense, all-wood hardboard. Send for your copy today!

BETTER HARDBOARDS FOR BETTER PRODUCTS

MASONITE® CORPORATION

Dept. NED-10, Box 777, Chicago 90, Illinois

"Masonite" signifies that Masonite Corporation is the source of the product

▲ For more details circle NED-681 K3 on enclosed inquiry slip ▲

more efficient production . . . greater profit with Kennett Materials Handling Equipment

Trucks of any size made from hard Vulcanized Fibre; Fibre veneered under hydraulic pressure, on two sides of waterproof core; or from steel veneered to both sides of waterproof core. Rugged, easily handled, inexpensive. Eliminate needless labor costs, increase profits with efficient Kennett Materials Handling Equipment. Trays, trucks, tote boxes in standard sizes or designed to fit your needs. Write today for complete details.

FIBRE SPECIALTY MANUFACTURING CO.

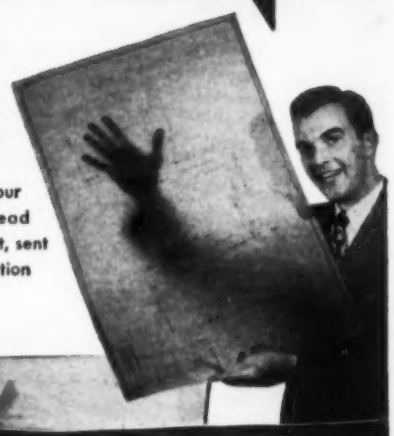
(Div. National Vulcanized Fibre Co.)

P.O. Box 311 Wilmington, Delaware

▲ For more details circle NED-682 K3 on enclosed inquiry slip ▲

TEST IT FREE! Samples of VELLUM are yours for the asking. Send for this kit today.

Write on your company letterhead for sample kit, sent without obligation



Ageproof VELLUM

Permanently super-transparent AGEPROOF makes better prints now, or years from now

This is the famous Dietzgen vellum that combines a perfect drafting surface with perfect reproduction qualities. And AGEPROOF VELLUM cannot turn yellow, become brittle or lose transparency with age.

Plasticized through and through, AGEPROOF VELLUM contains no oil, no wax to bleed, become rancid or turn color. Because the plastic transparentizing agent permeates every fibre, you can erase repeatedly without troublesome ghosts occurring in prints, and redraw without feathered lines if you are using ink.

Available in three different weights, in frost-white or eye-easing blue. Test AGEPROOF VELLUM and you'll never use any other material for important tracings.

EUGENE DIETZGEN CO. • Chicago • New York • San Francisco • New Orleans • Los Angeles • Pittsburgh • Washington • Philadelphia • Milwaukee • *Dealers in All Principal Cities*

DIETZGEN

EVERYTHING FOR DRAFTING SURVEYING & PRINTMAKING

Free Samples!

▲ For more details circle NED-683 K3 on enclosed inquiry slip ▲

HOW YOU CAN *hear better* TO TELEPHONE

Loudness of Noise Reduced 50%* Inside a

BURGESS-MANNING

Acousti-Booth

- Thick walls of sound absorbing material, patented design, and craftsmanlike construction reduce the loudness of noise by 50%*... leaving a zone of quiet for ease of telephoning.
- Doorless construction makes for a light, airy, well ventilated booth ... easy to keep clean ... low maintenance.
- Easy to move ... Suited to any noisy location ... Wall and floor models ... Handsome in appearance.

Write for Bulletin A-107 Model 211 Floor Model

** Based on studies by a prominent research organization.*

BURGESS-MANNING COMPANY

Architectural Products Division

5970-C Northwest Highway, Chicago 31, Illinois

For more details circle NED-684 K3 on enclosed inquiry slip

THE *RIGHT* TOOL WHEN YOU WANT IT

This Continental Counterbore Set No. 1 contains a wide assortment of counterbores, countersinks and pilots arranged for quick selection. Its two holders feature Continental's Balanced Indestructible Drive, in which the tools are engaged or disengaged by a simple "twist of the wrist." One of Continental's three standard counterbore sets is sure to suit your needs. Order through your local Ex-Cell-O representative or write to Continental for complete information. Ask for Bulletin B47-37.

52-10

CTW

Continental Standard Counterbore Set No. 1 for counterboring, spot-facing and countersinking.

CONTINENTAL TOOL WORKS

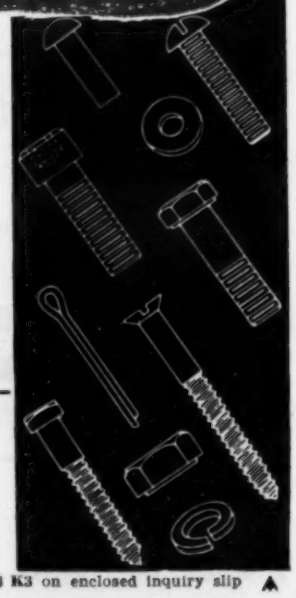
DIVISION OF EX-CELL-O CORPORATION • DETROIT 32, MICH.

For more details circle NED-685 K3 on enclosed inquiry slip

STOP CORROSION with HARPER

EVERLASTING FASTENINGS BY THE DOZENS OR BY THE MILLIONS

If you use fastenings of brass, bronze, copper, monel, aluminum or any stainless steel, you can get what you want from Harper. Over 7,000 items stocked—all backed by Harper's advanced metallurgists and skilled engineers. See your Harper Distributor.



HARPER

EVERLASTING FASTENINGS

The H. M. Harper Company
8212 Lehigh Avenue
Morton Grove, Illinois
Please send me Harper Catalog.

Name.....

Address.....

City.....*State*.....

For more details circle NED-686 K3 on enclosed inquiry slip

SMALL PARTS CLEANER
operates on 30 to 120 psi air

Cleaning of small parts or complete assemblies in this automatic parts washer is achieved by action of oscillating turntable which is submerged in cleaning solution. Parts are placed in perforated basket which rides on turntable, while assemblies are placed directly on turntables. Speed is variable from 0 to 240 oscillations per minute by dialing desired speed on ¼-hp air motor. Latter operates on 30 to 120 psi pressures. Solution-saving drain tray is an integral part of machine. Cover is splashproof, and 20 x 20 x 15 in. tank is extra heavy gage steel. Made by **Kelite Products, Inc.,** 1250 N. Main St., Los Angeles 12, Calif.

For more details circle NED-687 K3 on enclosed inquiry slip

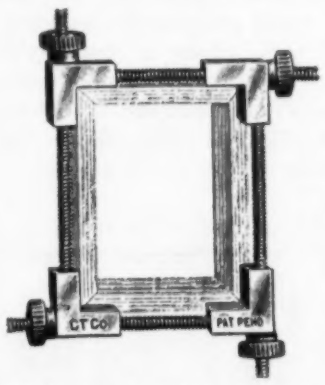
OILING SYSTEM
is automatic and air operated

Fully automatic and operating on compressed air, Oil-Air oiling system is designed for plain ball and roller bearings, vees, slides, ways, rollers, cams, chains, gears and transmissions. It can be installed to deliver lubrication at any point. Amount of oil flow is adjustable. The mixture of oil and air passes through a reclassifier which reduces it to drops of oil which are then conducted to lubrication points. System consists of solenoid valve, filter, water separator, regulating valve, lubricator, reservoir, pressure switch and low-level indicator. Made by **J. N. Fauver Co.,** 47 W. Hancock Ave., Detroit 1, Mich.

For more details circle NED-688 K3 on enclosed inquiry slip

MITER-FRAME CLAMP
clamps all four corners at one time

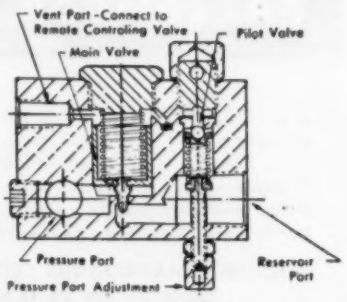
All four corners of any square or rectangular frame are clamped at one time by this No. 780 Hargrave miter-frame clamp. Quickly adjusted to any size within maximum opening, clamp can be used on finished stock and will not mar the work. Corner blocks are aluminum alloy, while ¼-in. diameter screws and knurled adjusting nuts are steel. Nuts tighten down to good grip and will not slip. Four sizes are made with maximum square openings of 8, 12, 18, 24 in. Minimum opening for all sizes is 2 in. Made by **Cincinnati Tool Co.,** 4087 Montgomery Rd., Cincinnati 12, O.



For more details circle NED-689 K3 on enclosed inquiry slip

RELIEF VALVE
pilot type is remotely operated

When it is not practical to place a standard relief valve in normally accessible location or near other machine controls, this remotely operated pilot type can be used. Unit has internal pilot valve which is set at maximum rating of pump or machine, plus provision for connecting one or more external pilot valves. Relief pressure is constant and little affected by flow, temperature or oil viscosity. No warm-up time is required, and cracking pressure is 90 per cent or more of maximum relief pressure. Made by **Fluid Controls, Inc.,** Dept. B, 1284 N. Center St., Mentor, O.



For more details circle NED-690 K3 on enclosed inquiry slip

TESTED-PROVEN-ACCEPTED FOR OVER 100 YEARS!

Stock Patterns:
BLACKSMITHS
HORSESHOERS
PLOW MAKERS
SAW MAKERS
CHAIN MAKERS
ANVIL STANDS

Grey Iron and Semi-steel Castings

EAGLE ANVILS since 1843

SPECIAL ANVILS ANY WEIGHT OR SIZE UP TO 700 POUNDS

All anvils meet government specifications for quality tools.

Power tool and die press anvils are available on quotation. Send us your requirements.

Stock anvils come in 17 sizes, in weights from 50 to 700 pounds. Write for price list.

FISHER & NORRIS
"EAGLE" ANVIL WORKS
41 Bloomsbury Street, Trenton, N.J.

For more details circle NED-691 K3 on enclosed inquiry slip

NEW GUIDE TO A PIONEER PLASTIC

Booklet Gives Latest Information

Here's a *new* booklet about a group of *old* plastics—BAKELITE Phenolics. It contains helpful, up-to-the-minute information on these materials that have served virtually all industries and are constantly finding new uses. Designers and manufacturers can profit by reviewing the tables of technical data, descriptions of properties, and applications in many fields.

The booklet features five classes of BAKELITE Phenolic Molding materials:

BAKELITE General-Purpose phenolic molding plastics are economical... easy to handle... have all-round serviceability. These plastics feature water resistance, handsome appearance, good impact strength, minimum odor. Typical applications include bottle caps, radio cabinets, instrument casings, brush handles.

BAKELITE Special Higher-Strength phenolic molding plastics have greater impact strength than general-purpose phenolics. They also have improved moisture resistance under longer periods of immersion. Applications include washing machine agitators, telephone handsets, electrical plugs and receptacles.

BAKELITE Heat-Resistant phenolics have greater heat resistance, are more dimensionally stable. They are used for toaster handles, ignition parts, heater plugs.

BAKELITE Low-Loss Electrical phenolics provide low power factor, low loss, high resistivity, dimensional stability and low water absorption. Uses include capacitor cases and frames, condensers, coil forms, resistors.

BAKELITE Special phenolic molding plastics include those with improved chemical resistance, low frictional phenolics, and X-ray phenolics.

Learn how much BAKELITE Phenolic molding plastics can do for *your* business! Write Dept. RG-53 for your copy of this 20-page illustrated booklet.

BAKELITE
TRADE-MARK
PHENOLIC MOLDING PLASTICS

TRADE MARK
BAKELITE COMPANY
A Division of
Union Carbide and Carbon Corporation
UCC
30 East 42nd Street, New York 17, N. Y.
In Canada:
Bakelite Company (Canada) Ltd., Belleville, Ont.

For more details circle NED-692 K3 on enclosed inquiry slip

Save!
with carbon and graphite
molds and dies

The ease with which carbon and graphite molds may be formed or machined to close tolerances often spells real economy. *In foundry work,* their high heat capacity makes them ideal as chills for both ferrous and non-ferrous metals. *In powder metallurgy,* they withstand heavy pressure at high heat and are widely used for hot pressing tungsten carbide base tool materials. And there are many other uses! Write on letterhead for Catalog 40A.

STACKPOLE

STACKPOLE CARBON COMPANY, *St. Marys, Pa.*

EVERYTHING IN CARBON BUT DIAMONDS

For more details circle NED-693 K3 on enclosed inquiry slip

for ruggedness and simplicity, long life and low maintenance. A real material handling cost saver. Available in various suspensions and speeds; in capacities 1000 to 6000 lbs.

Ask for Bulletin 668

DETROIT HOIST & MACHINE CO.

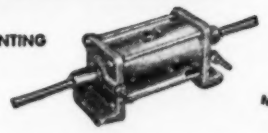
48th year—Designers & Manufacturers of Hoists and Cranes

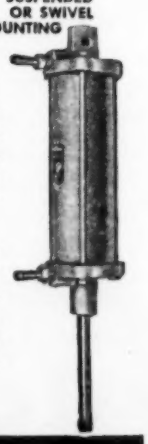
8248 Morrow St. • Detroit 11, Mich.

For more details circle NED-694 K3 on enclosed inquiry slip

DOUBLE-ACTION

AIR CYLINDERS





Mounting	Bore				
Horizontal	1½"	2¼"	3"	4"	5"
Vertical	1½"	2¼"	3"	4"	5"
Face	1½"	2¼"	3"	4"	5"
Swivel	1½"	2¼"	3"	4"	5"

Length of stroke optional

The new Mead Air Power Catalog shows the full line of single and double-acting cylinders, and air-operated Presses, Vises, Chucks, Hammers, Work Feeders — for faster, money - saving production.

Write!

MEAD

SPECIALTIES COMPANY

4114 NO. KNOX AVE. DEPT. NA-103, CHICAGO 41, ILL.

For more details circle NED-695 K3 on enclosed inquiry slip

FLUID MOTORS
capacities up to 52 hp

Gear type oil hydraulic motor is designed to give reversible rotary motion. It is made in capacities up to 52 hp and designed for operating pressures to 1500 psi. Bronze wear plates, large heavy duty roller bearings and four assembly bolts in area of greatest internal pressure are features. Made by **New York Air Brake Co.,** Hydreco Div., 1107 E. 222nd St., Cleveland 17, O.

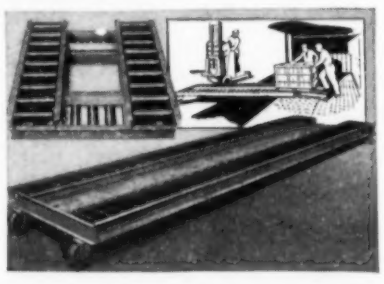
For more details circle NED-696 K3 on enclosed inquiry slip

NOISE-PREVENTING EAR VALVE
flip booklet illustrates operation

Novel flip booklet illustrates how noise is controlled by the Lee Sonic Ear-Valv. Flipping pages animates figures which make understandable the mechanical operation of the valve. It shows how an inner valve is activated by sound pressure to control and eliminate loud, harmful noise before it is permitted to enter ear canal. This ear insert leaves ear canal open to air and normal atmospheric conditions, and permits hearing of desired sounds. Made by **Sigma Engineering Co.,** Dept. Z, 1491 N. Vine St., Los Angeles 28, Calif.

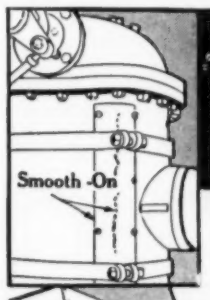
For more details circle NED-697 K3 on enclosed inquiry slip

PALLET HANDLING METHOD
for use in refrigerator cars



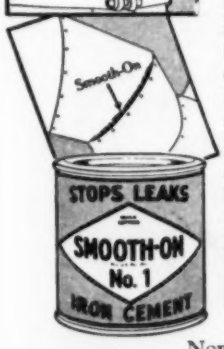
Efficient loading and unloading of refrigerator cars is provided by this combination pallet dolly and roller ramp. Closely spaced travel rollers on improved dolly assure smooth, easy rolling across the ventilating spaces in refrigerator cars. Dolly also has a roller deck that matches the end of the roller ramp which is used to bridge the space between the dock and the car. Loaded pallets, set on the ramp with a fork truck, are rolled into the car and onto the dolly. They are then rolled to proper point for unloading inside the car. Made by **Samuel Olson Mfg. Co.,** 2423 Bloomingdale Ave., Chicago 47, Ill.

For more details circle NED-698 K3 on enclosed inquiry slip



Repairs both Cast and Sheet Metal

The quick-hardening, fast-clinging, temperature-resistant properties of Smooth-On No. 1 Iron Cement make it just right for countless repairs in industrial plants, shops, homes. It seals cracked castings, stops leaks in breeching, tightens loose rivets, bolts, screws and machine parts. Does not require use of heat or "gadgets". Any handy man can use it successfully. Buy Smooth-On No. 1 in 1- 5- or 20-lb size and keep it handy. If your supply house hasn't Smooth-On, write us.



FREE Famous Repair Handbook

Now in its 28th edition, this 40-page, fully illustrated, pocket-size manual shows many short-cut, time-saving, money-saving repairs to machinery, equipment, pipe lines, etc. Drop us a line for YOUR free copy.

SMOOTH-ON MFG. CO., Dept. 10
570 Communipaw Ave., Jersey City 4, N. J.
80-292

Do it with **SMOOTH-ON**

THE IRON REPAIR CEMENT OF MANY USES

For more details circle NED-699 K3 on enclosed inquiry slip

85-5-5-5 are important figures for the user of bronze valves. They stand for 85 per cent copper and five per cent each of lead, tin and zinc. A manufacturer of high quality bronze valves can provide certified proof that his valve bodies and center pieces contain alloys of this percentage. That's one guarantee of dependable service when those valves go on your lines. All Ohio Brass valves are cast in our own foundry. Test bars are taken from our foundry twice daily, for testing both chemically and physically, according to procedures recommended by the American Society for Testing Materials.

Ohio Brass VALVES

MANSFIELD, OHIO

For more details circle NED-700 K3 on enclosed inquiry slip

You Just Can't File Away These Problems...

BLAST CLEANING

...of bridges, buildings, tanks, structural work

Pangborn Blast Cleaning Machine—Cleans tanks, bridges, structures quickly and economically. Ideal for maintenance and other jobs, such as removal of dirt, rust, etc. Six sizes, stationary or portable, $188 and up.

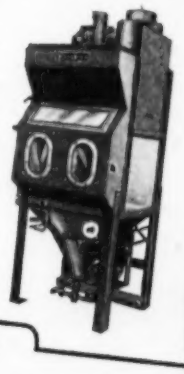
...of small castings, forgings, stampings, heat treated parts,

Pangborn Blast Cabinet—Saves time and money in cleaning small metal parts, removing rust, scale, grime, old paint, etc., in a few seconds. Perfect for producing clean, smooth surfaces on pieces 60" x 35" in size. Models from $319 and up.

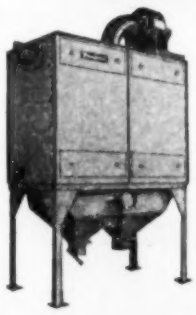
PRECISION FINISHING

...of molds, dies, tools

Pangborn Hydro-Finish Cabinet—Removes scale and directional grinding lines . . . holds tolerances to .0001" and prepares surfaces for painting or plating. Liquid blast reduces costly hand cleaning and finishing of molds, dies, tools, etc. Models from ..... $1410 and up.



CONTROLLING DUST



...at the source of origin

Pangborn Unit Dust Collector—Traps dust at the source. Reduces maintenance costs . . . keeps plant clean and improves community relations. Allows reclamation of valuable material. Models from ..... $286 and up.

BUT YOU CAN MAIL THIS COUPON TO PANGBORN FOR HELP IN SOLVING THEM!

Pangborn

Look to Pangborn for the latest developments in Blast Cleaning and Dust Control equipment

☐ Blast Cleaning Cabinets
☐ Blast Cleaning Machines
☐ Unit Dust Collectors
☐ Hydro-Finish Cabinets

PANGBORN CORP., 2400 Pangborn Blvd., Hagerstown, Md.

Gentlemen: Please send me more information on the equipment I've checked. To be used for.....

.....

Name .....

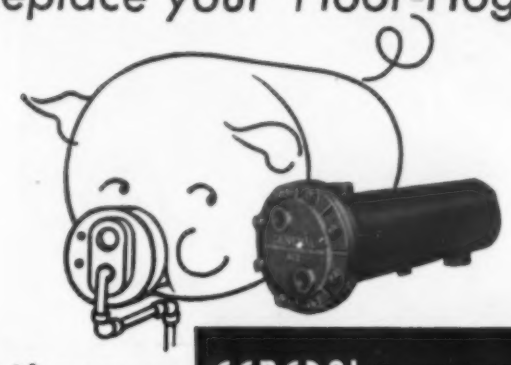
Company .....

Address .....

City .....Zone....State.....

For more details circle NED-701 K3 on enclosed inquiry slip

Replace your "Floor-Hog"...



with a compact GENERAL Instantaneous Water Heater

Here's a dependable, continuous water heating unit you can install in a fraction of the space required by storage tanks. You can even install it overhead.

GENERAL Instantaneous Heaters cost less . . . less to buy, install, and maintain. Just tap into live or exhaust steam lines . . . no excavating, no complicated piping.

Rust-free, piping-hot water delivered through seamless copper tubing . . . outlives other systems.

20 sizes—largest, only 21" x 84", delivers 300 gpm. Investigate *all* the advantages of GENERAL Instantaneous Heaters. Write: General Fittings Co., Dept. J, 123 Gerogia Ave., Providence 5, R. I.

GENERAL GF

TANKLESS AND INDIRECT WATER HEATERS AND HEATING SPECIALTIES

For more details circle NED-702 K3 on enclosed inquiry slip

THE ONLY SAFETY SWITCH IN SPECIAL INDUSTRY ENCLOSURE!

NOW- NEMA Type XII

• This new heavy duty switch, built to NEMA XII specifications, is "tailor-made" for applications requiring protection from dirt, dust, oil and coolant.

Write for Bulletin SD-5. Address Square D Company, 6060 Rivard Street, Detroit 11, Michigan

ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS

SQUARE D COMPANY

For more details circle NED-703 K3 on enclosed inquiry slip

SLOW SPEED VERTICAL DRIVES FOR EVERY JOB...

If you have an application requiring vertical drives to operate at slow speed, you will find a complete line of enclosed vertical drives at Foote Bros. These drives are newly engineered with precision generated gearing backed by advanced engineering, new techniques in manufacture and better control of material. May be had with standard output shaft or with extended shaft. Mail the coupon for information.

Foote Bros. Gear and Machine Corporation
Dept. NE, 4545 So. Western Blvd., Chicago 9, Illinois

Please send me information on Foote Bros. Vertical Drives.

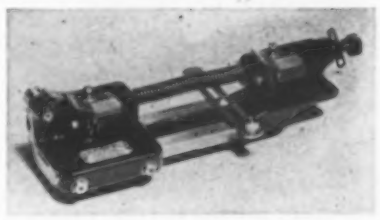
Name.....

Address.....

City.....State.....

For more details circle NED-704 K3 on enclosed inquiry slip

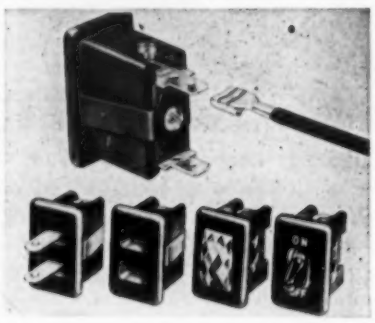
STOCK FEEDER
mounts on die set or bolster



Featuring a heavy semisteel main frame and moving member, this stock feeder for punch presses and similar machines will give feed lengths up to 2½ in. per stroke. Model K Hitch Feed utilizes gripping plate principle and will feed stock up to 0.031-in. maximum thickness. Stock insertion or removal is performed instantly without tools, and the feed can be mounted on die set or bolster to feed from any direction. Two or more units can be used to feed separate ribbons from different directions to be worked on in the die. Made by **H. E. Dickerman Mfg. Co.,** Dept. ED, 321 Albany St., Springfield, Mass.

For more details circle NED-705 K3 on enclosed inquiry slip

SNAP-IN ELECTRIC UNITS
have quick connect terminals



Diamond H snap-in switches, outlets, pilot lights and interconnecting load plugs are now available with spade terminals for A-MP Quick Connect connectors as well as with standard screw terminals. These instant-mounting devices are applicable to wide range of electric equipment, appliances and machines because they simply push into mounting holes where spring clips hold them firmly in place. New terminals make it possible to wire the devices with similar speed. Made by **Hart Mfg. Co.,** Dept. N, 110 Bartholomew Ave., Hartford, Conn.

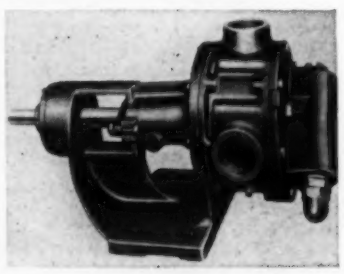
For more details circle NED-706 K3 on enclosed inquiry slip

HEAT PUMP
heats in winter, cools in summer

Designed for around-the-calendar operation, the Prop-R-Temp self-contained heat pump unit performs cooling functions in the summer and heating functions in the winter. In summer it takes heat from the air and puts it in the ground, while in the winter heat is drawn from the ground and put into the air to heat a building. The heat pump is thermostatically controlled, quiet in operation, compact and offers automatic humidity control. Unit can be installed in new or existing structures and is equipped with filters to remove airborne dust and dirt. Made by **Typhoon Prop-R-Temp Corp.** of Florida, 106 E. Buffalo Ave., Tampa 3, Fla.

For more details circle NED-707 K3 on enclosed inquiry slip

ROTARY PUMP
for pumping "difficult" liquids



Particularly useful for pumping such "dry" liquids as aviation gasoline, ammonia and LP gas, the Invader pump can be used either for truck mounted or stationary service and is available in capacities of 35, 50, and 100 gpm. It has rounded teeth that provide a rolling contact between the pumping gears, and is equipped with a double mechanical seal to prevent leakage. A double row radial thrust bearing aligns the shaft, fitted with double seal caps as protection against wear and dirt. Relief valve is reversible for changing the direction of rotation, and the grease chamber holds a four-months supply. Made by **Schirmer-Dornbirer Pump Co.,** 1719 E. 39th St., Cleveland 14, O.

For more details circle NED-708 K3 on enclosed inquiry slip

You can't buy a **better** "soft" hammer -anywhere!

C/R JAW-HEAD

There's plenty of power cushioned in the tough, resilient water buffalo faces that give delicate parts and fine finishes full protection. Faces are easily, quickly replaced. You have a comfortable, non-slip grip with the Safety-Flare handle. Work with the best "soft" hammer — make sure it's a C/R RAWHIDE Jaw-Head.

NEW FACES IN SECONDS! Just loosen a nut and old faces are easily replaced. Tighten nut, and faces are in vise-like grip.

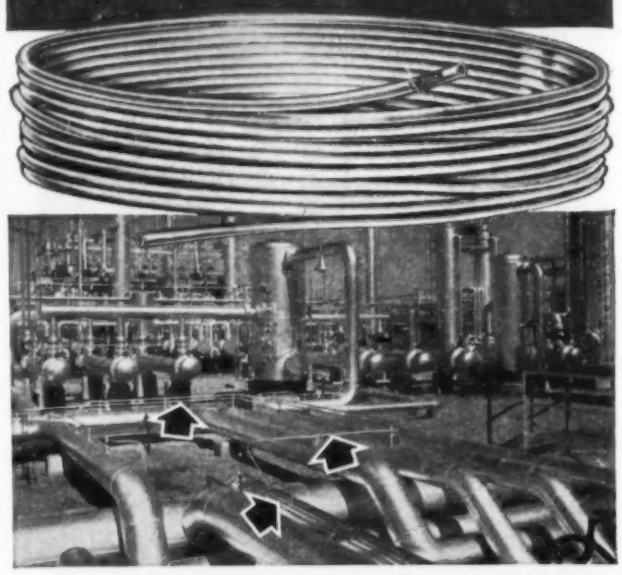
For further information write Dept. 22

CHICAGO Rawhide MFG. CO.
1301 Elston Ave., Chicago 22, Ill.
In Canada: Super Oil Seal Mfg. Co., Ltd., Hamilton, Ontario

Available from leading industrial suppliers. Also C/R Rawhide mallets and Rawhide mauls.

For more details circle NED-709 K3 on enclosed inquiry slip

Save 40% with ALCOA UTILITUBE



Instrument air lines of ALCOA Aluminum Coiled Tube, still in good condition after five years of outdoor service at Sun Oil Company's Delhi (La.) Gasoline Plant, have required no maintenance since they were installed early in 1948.

ALCOA UTILITUBE* is aluminum coiled tube made of a specially selected alloy to provide low cost, easy workability and high fatigue strength.

Alcoa Utilitube offers savings up to 40 per cent over copper . . . has excellent on-the-job forming and flaring properties. It is available in economical, long lengths up to 1,000 feet or more, depending on size. It stands up well under vibration . . . has high resistance to most industrial atmospheres and to many liquids and gases.

Use Alcoa Utilitube for:

- Air for pneumatic and hydraulic control circuits
- Gasoline and fuel oil for internal combustion engines.
- Lubricating oils for engines and machines.
- Fluids for hydraulic systems.

For complete details, write for the new booklet "Alcoa Utilitube."

ALUMINUM COMPANY OF AMERICA
1002-K Alcoa Building, Pittsburgh 19, Pa.

For process chemicals—catalysts, catalyst supports and desiccants—investigate ALCOA *Chemicals.*

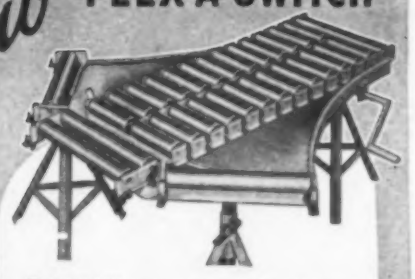
*Registered Trademark, Aluminum Company of America

Alcoa Aluminum

ALUMINUM COMPANY OF AMERICA

For more details circle NED-710 K3 on enclosed inquiry slip

3 WAY Flow "FLEX-A-SWITCH"



LEFT and RIGHT and THROUGH

ROLLERS are concentric at any setting to assure positive line of travel without guard rails. Can be used with curves and straight sections to distribute work in production or warehouse handling. Standard 11½"; 15"; 18" conveyor widths.

2 WAY Flow

Remote or manual control. Remote control illustrated at left.

WRITE FOR DETAILS

• LEFT & THROUGH
• RIGHT & THROUGH

METZGAR CO.

MFGRS. OF WHEEL & ROLLER GRAVITY & LIVE ROLLER CONVEYORS • POWER BELT CONVEYORS • SWITCHES • ACCESSORIES & REEL DOLLIES

416 Douglas, N. W.

GRAND RAPIDS 4, MICH.

For more details circle NED-711 K3 on enclosed inquiry slip

Save Time...Labor...Material with BEVERLY metal cutting SHEARS

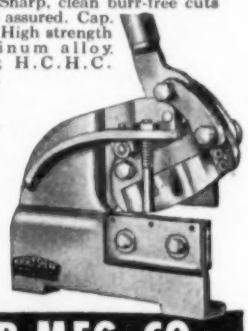
throatless SHEARS

Make any cut—straight, irregular, curved. Exclusive design permits turning work any direction while cutting. 4 models—cap. to 3/16".

Inside SLOTTER

Makes cuts up to 8" inside edge of sheet. Sharp, clean burr-free cuts always assured. Cap. 16 ga. High strength aluminum alloy body; H.C.H.C. blades.

slitting SHEAR



New "SS" Series—easier cutting with compounded linkage. 3 models—cap. to 3/16"; trimming capacity to ¼" mild.

See your Beverly Distributor. Write for FREE illustrated Bulletin.

Beverly SHEAR MFG. CO.

3016 W. 111th STREET • CHICAGO 43, ILLINOIS

For more details circle NED-712 K3 on enclosed inquiry slip

The "language of files and filing" is a necessary part of every good mechanic's education—whether he is "majoring" in a specialized type of operation or is assigned to miscellaneous work around the shop. The days of haphazard file selection and filing techniques are gone in modern shop practices. Parts finishing, assembling and fitting must take into account diversity of metals, degree of accuracy—and the speed necessary to keep production costs within bounds.

Nicholson file engineers study these factors and design files with tooth shapes, angles, sharpness and hardness to fit specific metals, methods and end results. With Nicholson, making files is a *science*.

If your industrial distributor handles Nicholson or Black Diamond brand files, he is well equipped to give your production heads helpful technical suggestions.

Free book, "File Filosophy"

NICHOLSON FILE CO. • 34 Acorn St., Providence 1, R. I.

(In Canada: Nicholson File Company of Canada Ltd., Port Hope, Ontario)

NICHOLSON U.S.A. NICHOLSON A FILE FOR EVERY PURPOSE

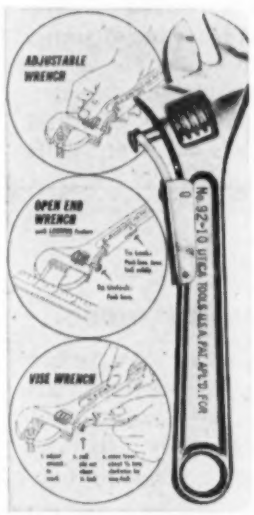
SHEET FEEDING MAGNET offered in 6, 9 and 12-in. sizes, fans stock for easy handling

Usable wherever steel sheets are handled in piles such as in stamping, punch press or shearing operations, this line of industrial sheet fanner magnets separates oily sheets without prying, lifts polished or painted sheets without marring them, prevents double-sheet feeding, assures safety to operator from sharp edges, protects dies, handles irregular or odd shapes and speeds production. Fanners are available in four strengths and in 6, 9 and 12-in. sizes. Depending upon the application, they will handle from 22-gage sheets to ¼-in. plates.

Alnico V plate magnets are mounted on an aluminum L-bracket so that pole plates and air gap are vertical. Stainless steel antifriction guides positioned on the face of the L-bracket accommodate sheets as small as 4-in. wide. These two narrow strips minimize frictional resistance to the elevation of sheets from the pile and removal of sheets from the face of the magnetic assembly. Unit is fastened to the surface supporting the pile of sheets which are placed beside it. Magnetic action causes sheets to repel each other so that they lift or will rise at the slightest touch. Made by **Eriez Mfg. Co.**, 1325 E. Twelfth St., Erie, Pa.

For more details circle NED-713 K3 on enclosed inquiry slip

ADJUSTABLE LOCKING WRENCH offered in 8, 10 and 12-in. sizes



Jaws of this No. 92 locking wrench can be locked rigid at any setting. In addition, it acts as a vise-wrench by exerting a 100-lb grip on bolt or machine component on which it is used. Opening can be set by adjusting it lightly to the work or by setting jaws with a ruler to the desired opening. Slight push on a lever locks the adjustment. Push on button releases the lock jaws for further use. As a vise-wrench, tool is adjusted lightly to work, lock lever is moved out until clutch mechanism engages the knurl, and a slight clockwise turn of the lever squeezes the jaws together vise-tight. Reverse movement of the locking lever releases the grip. Made by **Utica Drop Forge & Tool Corp.**, 2500 Whitesboro St., Utica 4, N. Y.

For more details circle NED-714 K3 on enclosed inquiry slip

change from cord to Cordomatic® TROUBLE LIGHT REELS

• Reg. U.S. Pat. Off.

GIVES YOU LIGHT WHEN YOU WANT IT—WHERE YOU WANT IT!

$9.95 FOR 20' EXTENSION MODELS
25' MODELS—$14.95
40' MODELS—$19.95

√ MODERN √ EFFICIENT √ ECONOMICAL

No more tangling in a clumsy wire "booby trap" that's always in your way, causing short tempers and painful accidents! Save time, trouble and money the Cordomatic way. Cordomatic works like a window shade—just pull out the length of cord you need, and it locks in place automatically! A flick of the wrist, and z-z-zip, it rewinds itself. One Cordomatic Trouble Light Reel will outlast many ordinary drop cords.

Available Through Your Local Automotive Jobber

No installation costs. Just hang up, plug in!

Foolproof "Gravity Action" Recoil Mechanism . . . locks at any desired length!

U/L Approved #18-2 S.V.O. Neoprene jacketed, kink-proof cord! Oil and water resistant.

New "Stubby" Handle! 100% Neoprene with protector ears.

New type "swing open" guard.

Unconditionally guaranteed for one year!

Cordomatic DIVISION OF THE VACUUM CLEANER CORP. OF AMERICA

PLANT NO. 2: CROSKEY ST. & INDIANA AVE.

PHILADELPHIA 32, PENNA.

For more details circle NED-715 K3 on enclosed inquiry slip

The Portable MORSE ROTATOR

CUTS COSTS OF:
• MIXING
• BLENDING
• TUMBLING
• CLEANSING

MODEL 500

A powerful, compact motorized unit that will cut costs of mixing, tumbling, cleaning, etc. Scientifically engineered for smooth, safe revolving at speeds of 10, 20 or 40 RPM. Can be loaded by ONE MAN and is easily moved. The power drive has a ¾" dia. shaft and is equipped with self-aligning bearings. Four 4" dia. Neoprene drive wheels with idler attachments are adjustable to take from 1 to 55 gal. drums or cylindrical containers. Wt. before crating 137 lbs. Furnished with motor, gear reduction unit and tipping lever. *Write for complete information.*

MORSE MANUFACTURING CO., INC.

756 West Manlius St. East Syracuse, N. Y.

For more details circle NED-716 K3 on enclosed inquiry slip

Quick-As-Wink AIR AND HYDRAULIC Control Valves

FEATURE THIS MONTH

Single Plunger Solenoid Pilot Operated Valves

They'll give you millions of cycles of efficient trouble-free operation

● Quick-As-Wink Solenoid Valves are unsurpassed for positive, trouble-free dependable service . . . they give users millions of cycles of fast, high speed — and safe — operation. All parts are rugged. Low amperage requirement of the solenoid eliminates intermediate relays and simplifies electrical circuits. ⅜" to 2" sizes. 2-way, 3-way or 4-way actions. Bucking cylinder or double solenoid return. Send for the data sheets. Get full details about Quick-As-Wink, America's outstanding valve line, today.

also the following

PUSH BUTTON OPERATED AIR VALVES

Push-pull or push and spring return operation — ⅛" and ¼" tapped connections. Widely used for controlling cylinders and many other applications. Air to 125 psi — vacuum—can also be used in low pressure hydraulic service.

LEVER OPERATED HYDRAULIC VALVES

Two position or three position valves ½" to 1½" sizes for line pressures 1000 to 5000 psi. Can be furnished in neutral, compound-exhaust or compound-on actions. Pilot cylinder operated types available up to 4".

For Fully Descriptive Data Sheets Write

C. B. HUNT & SON, Inc.

Hand, Foot, Lever, Cam, Pilot, Diaphragm and Solenoid Control Valves

2022 EAST PERSHING STREET • SALEM, OHIO

For more details circle NED-717 K3 on enclosed inquiry slip

Safeguards plant and personnel while **speeding up** *materials handling!*

trouble-free . . . 335° swivel
APPLETON REELITE
Traveling Power Supply

A Size and Model for every job!

• The new "YS" Reelites are quality products throughout . . . built for long uninterrupted service. They are one of many trouble-free APPLETON Reelites available to industry to supply traveling power on any job regardless of size.

For better materials handling in *your* plant, find out about APPLETON Reelites. Write for Bulletin 504, *today!*

Also Manufacturers of:

Sold Through Electrical Wholesalers

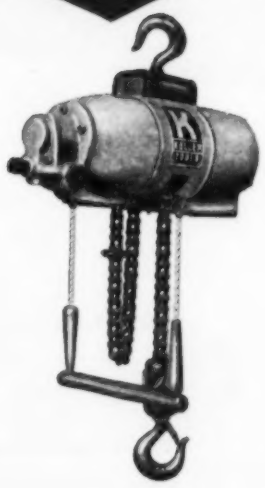
APPLETON ELECTRIC COMPANY
1758 Wellington Ave., Chicago 13, Ill.

For more details circle NED-718 K3 on enclosed inquiry slip

KELLER Air Hoist

Sensationally Different

can't burn out *when stalled*



Positive displacement piston-type air motors assure accurate control of the load.

Lifting and lowering speed can be anything desired from 0 to 17 fpm. Permits accurate spotting.

Weighs less—1,000-lb hoist weighs only 30 lb—one man can carry it up and down a ladder.

Air motors rated for continuous duty—can't burn out, even if stalled all day!

Send for **illustrated descriptive bulletin and detailed information**

Keller Tool Company
GRAND HAVEN, MICHIGAN

For more details circle NED-719 K3 on enclosed inquiry slip

ANNOUNCING...
REMINGTON RAND'S
NEW, Simple, Low-Cost Microfilm unit

Film-a-record Model 4

Dozens of uses—Saves time and space in keeping records like these: Management and department reports, purchase orders, time cards, cancelled checks, inspection reports, receiving and shipping memorandums. Also, engineering specifications, designs, operation sheets, cost records, personnel records, correspondence etc.

Microfilms pages of bulky reports stapled together, pages of engineering notebooks, magazines, or books. Convenient foot switch frees operator's hands for rapid handling of records.

Clip coupon and mail now to get your FREE booklet

Remington Rand INC

Management Controls Reference Library, Rm. 1272, 315 4th Ave., N. Y. 10

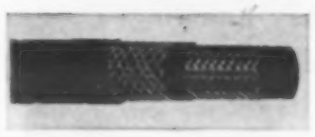
Free copy please of booklet F356 describing NEW design features of Film-a-record Model 4.

Name_____ Position_____
Firm_____
Address_____
City_____ Zone____ State_____

PROFIT-BUILDING *IDEAS* FOR BUSINESS

For more details circle NED-720 K3 on enclosed inquiry slip

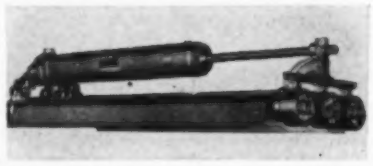
MULTIPURPOSE HOSE
flexible, withstands high pressure



Wire reinforced, this Ironsides Utility hose is designed for multipurpose work where extreme flexibility and resistance to high pressure are required. It is adaptable for use as air, oil, water, gasoline, spray and hydraulic line hose at working pressures as high as 1500 psi. It has a nonporous oil-resistant tube, reinforced with two separate braids, one of steel wire and the other of rayon. Wire acts as electrical conductor for grounding static. Cover is oilproof Neoprene and is colored bright yellow for high visibility. Hose is available either with high pressure reattachable or pressed-on hydraulic fittings and is made in ⅜ to 2-in. ID sizes. Made by **Quaker Rubber Corp.**, 4905 Comly St., Philadelphia 24, Pa.

For more details circle NED-721 K3 on enclosed inquiry slip

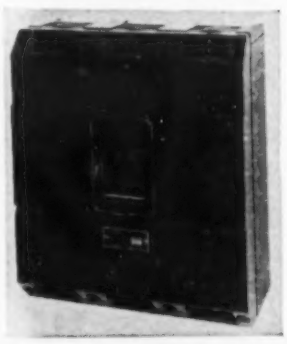
EXPLOSIONPROOF FIXTURE
is fluorescent lighting type



Usable wherever explosive gases or vapors or combustible dusts constitute a hazard, this line of explosionproof dust-tight fluorescent lighting fixtures can be mounted end-to-end to provide uniform continuous illumination. Each fluorescent tube is mounted in an individual tube of heat resisting glass. Reflectors have white enamel reflective surface and aluminum finish exteriors, and are removable for cleaning. Link member of supporting stem assembly allows the relamping end to be lowered for easy access without interference from adjacent fixture in end-to-end installations. All servicing is performed without tools. These type EVF fixtures are offered with straight pendant mounting, but special fittings are available for 45-degree mounting. Made by **Crouse-Hinds Co.**, Dept. EPL, Syracuse 10, N. Y.

For more details circle NED-722 K3 on enclosed inquiry slip

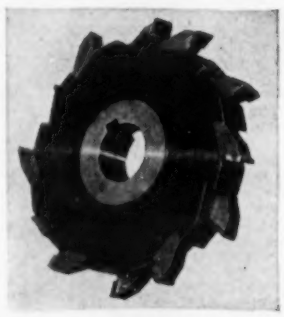
CIRCUIT BREAKER
design conserves mounting space



More compact than former 225-amp unit, J-frame circuit breaker measures only 9-in. wide, 11-in. long and 5½-in. deep including handle. Features include enclosed terminals, external instantaneous trip adjustment with choice of five settings, solderless pressure cable connectors and rear connection studs to simplify switchboard mounting. Unit is a thermal-magnetic breaker with quick-make, quick-break operating mechanism. Breaker is U.L. approved, factory calibrated and sealed to prevent tampering. Ratings are from 70 to 225 amp, two and three pole, 600 v ac, 250 v dc with 15,000-amp interrupting capacity. Made by **I-T-E Circuit Breaker Co.**, 1900 Hamilton St., Philadelphia 30, Pa.

For more details circle NED-723 K3 on enclosed inquiry slip

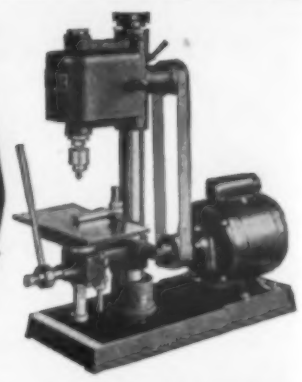
SLOTTING CUTTERS
use "stagger mounted" blades



A stagger tooth method of mounting replaceable blades permits use of only two standard blade sizes for any width of cut. Standard A size blades are used for cutters from ½ to ¾-in. wide, and all cutters over ¾-in. are made up with the B blades. All blades are available from stock. The stagger tooth mounting method avoids the use of long length of carbide and reduces the possibility of brazing strain causing failure during cutting. In addition to slotting, the cutters can also be used for heavy side milling. They range between 4 and 14-in. diameters. Replaceable blades are available in high speed steel, cast alloy, or with carbide tips. Made by **Millit, Inc.**, 51 Flint St., Rochester 8, N. Y.

For more details circle NED-724 K3 on enclosed inquiry slip

THIS TAPPING MACHINE IS **UNIQUE** IN THE FIELD OF SMALL HOLE PRECISION TAPPING



TAPPING CAPACITY
From the smallest and finest tap up to 10-32 inclusive.

SPINDLE SPEEDS
1200 to 2600 R.P.M.

CLEARANCE
Taps to the center of 6½"

HAMILTON® TAPPING MACHINE
SUPER SENSITIVE
SUPER ACCURATE

• Spindle idles in reverse. Changes direction of rotation automatically as pressure is applied to tap. Withdraws tap instantly and automatically when pressure is released.

REDUCE TAP BREAKAGE
REDUCE SCRAP
WRITE FOR FREE BULLETIN T-5313.

THE Hamilton TOOL COMPANY
901 HANOVER STREET • HAMILTON, OHIO • U • S • A

For more details circle NED-725 K3 on enclosed inquiry slip

drills **6** inches of concrete per minute

...gives lowest cost per foot of concrete drilled with a

tilden ROTARY KONKRETE KORE DRILL

Patented core slot expels cuttings *automatically*

U. S. Pat. No. Re. 23539

Drill straight, clean, ready-to-use holes at speeds up to 6 inches per minute—even through steel reinforced concrete. TILDEN Rotary Koncrete Kore Drills can be used with ordinary electric or rotary air drill. Free Factory sharpening and repair service still available on all Standard TILDEN Drills from 3/16" to 8-inch diameters. Interchangeable shanks for any depth hole.

SOLD BY SUPPLY HOUSES EVERYWHERE

WRITE TODAY for free, illustrated catalog.

TILDEN TOOL Manufacturing Company
209 Los Molinos • San Clemente, Calif.
Branch: 7111 North Glenwood, Chicago 26, Illinois

For more details circle NED-726 K3 on enclosed inquiry slip

...making "cobra coils" out of stainless tubing?

Probably your fabricating problem is not so complex—but whatever it is—here's the "charm" to make it easy. It's the new Carpenter Bending and Coiling slide chart for Stainless Tubing and Pipe. Send for it today.

THE CARPENTER STEEL COMPANY
Alloy Tube Division, Union, N. J.

For more details circle NED-727 K3 on enclosed inquiry slip

AMES

...the preferred Dial Indicators

One of America's largest and most famous mass-producers recently chose Ames as preferred source of supply for indicator gauges. They did because the four sizes of Ames "Hundred Series" indicators fit every measuring requirement; they are *accurate, sensitive,* low in friction, yet are *rugged* and *tough* — give *more* on-the-job time. All Ames products embody latest design and highest-quality materials; they are manufactured by methods and machines that are *exclusive* with B. C. Ames Co.

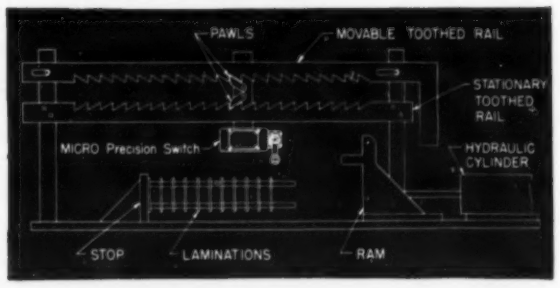
Send today for your free copy of Catalog No. 38

Representatives in principal cities. B. C. AMES CO. *34 Ames Street Waltham 54, Mass.*

Mfgr. of Micrometer Dial Gauges • Micrometer Dial Indicators

▲ For more details circle **NED-728 K3** on enclosed inquiry slip ▲

MICRO heavy duty limit switch makes accurate coil building an automatic job



● Spacing of laminations is done automatically on this coil building machine by use of a MICRO heavy duty limit switch.

1 The ram pushes laminations on tubes until contact is made with the limit switch.

2 When the switch is operated it trips a four-way solenoid valve which reverses the flow of oil in a hydraulic valve, forcing the ram to return.

3 When the ram reaches the end of its return travel an arm on the ram causes the switch assembly to move back one notch . . . ready for the next operation.

This is another of the thousands of uses plant engineers and maintenance men are making of MICRO switches as limits, safeties and interlocks on every type of plant equipment. It is easy to make machinery safer and more productive through the use of MICRO switches. There is an authorized MICRO distributor near you with a wide variety of switches to meet your specific needs. Look in your classified telephone directory under "Switches, Electric."

MICRO

MAKERS OF PRECISION SWITCHES

FREEPORT, ILLINOIS

A DIVISION OF MINNEAPOLIS-HONEYWELL REGULATOR COMPANY

▲ For more details circle **NED-729 K3** on enclosed inquiry slip ▲

SURFACE ROUGHNESS TRACERS for ½-in. ID and 24-in. deep holes

Line of six Profilometer type LE tracers is available for making surface roughness measurements in holes as small as ½-in. ID, as deep as 24 in. and from 1 to 75 microinches roughness. Units have an integral Linkarm or Stiffarm, each made in three standard lengths for measuring maximum depths of 9, 18 and 24 in. Tracers with Linkarms are for use with a motor-driven Mototrace, but can be used for hand tracing if necessary. Stiffarm-equipped tracers are for manual operation but can be used with a Mototrace by attaching to a standard Linkarm. Made by **Micrometrical Mfg. Co.,** Dept. 9, 345 S. Main St., Ann Arbor, Mich.

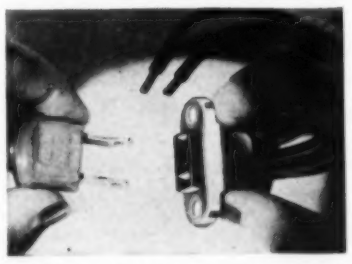
▲ For more details circle **NED-730 K3** on enclosed inquiry slip ▲

STRIP COIL SPLICER for continuous mills and processes

Permitting coils to be end-welded to supply a constant flow of strip to a continuous operation or to build up multiple length coils for such high speed operations as in cold reduction mills, Weld-a-matic equipment can be used with both ferrous and nonferrous metals. It rapidly produces a slim weld which is stronger than the parent metal and flat enough to roll without trimming. It is adaptable to most stock gages and widths. Welds can be produced satisfactorily on carbon, stainless, and silicon steel; aluminum; copper and bronze. Made by **Arms-Franklin Corp.,** Coiler Engineering Dept., Youngstown 1, O.

▲ For more details circle **NED-731 K3** on enclosed inquiry slip ▲

ELECTRIC OUTLET for building into products



Miniature prewired alternating current convenience outlet is offered with leads tailored to customer specification for installation into appliances, instruments and machines. Outlets use mounting holes on 1⅛-in. centers and take less than 1 in. behind the panel. Model 402ACCL has a single mounting plate of cadmium plated steel that mounts by spot weld, rivets or screws. Built-in leads come in standard 12-in. length, free ends stripped and tinned, or special lengths to order. Solid molded phenolic body has isolated pockets for each contact. Made by **Alden Products Co.,** 117 N. Main St., Brockton 64R, Mass.

▲ For more details circle **NED-732 K3** on enclosed inquiry slip ▲

4 Ways . . . FOSTER *Precision* HEIGHT GAGES

10" to 48"
are more buy for less money!

1. Adjustable Vernier TWICE as large as ordinary Verniers
2. Longer Slide
3. Heavier Base
4. Greater Accuracy

IMMEDIATE DELIVERY FROM STOCK

also FOSTER 6" to 96" Precision Vernier Calipers

Write

FOSTER SUPPLIES CO.

6124 Milwaukee Ave. • Chicago 30, Ill.

▲ For more details circle **NED-733 K3** on enclosed inquiry slip ▲

SEALING UNLIMITED!

PRESSTITE SEALING COMPOUNDS

OVER **400** SEALANTS TO

SEAL IN THE QUALITY OF YOUR PRODUCT
SEAL OUT DIRT, WATER, RUST, AIR...

AUTOMOTIVE . . . seal metal seams, windows, spotwelded body joints against dust, water, rust, air.

AVIATION . . . seal fuselage seams, fuel tanks, pressurized cabins, windows, gun turrets.

REFRIGERATION . . . bond and protect insulation, seal openings against air passage, seal joints and seams in refrigerators, freezers, air conditioners.

CONSTRUCTION . . seal sewer joints and paving joints, waterproof underground concrete . . . also protective coatings, caulking compounds, barrier papers.

RAILROADS . . . insulate, soundproof and weatherproof railway cars.

To protect the quality of YOUR product, write us about your sealing problem.

SEALANTS • COATINGS • ADHESIVES

PRESSTITE ENGINEERING COMPANY

3742 Chouteau Ave. St. Louis 10, Mo.

▲ For more details circle **NED-734 K3** on enclosed inquiry slip ▲

Specify **ESSEX EXTRA TEST TEFLON MAGNET WIRE**

WIRE SX PRODUCTS

for Your Highest Temperature Applications

★ **CAN WITHSTAND** 250° C for short periods of time; or 200° C continuously.

★ **SUPERIOR RESISTANCE** to acids, solvents, chemicals and moisture.

★ **GOOD SPACE FACTOR,** flexibility and abrasion resistance.

Teflon is the DuPont trademark for Polytetrafluoroethylene enamel.

ESSEX WIRE CORPORATION

FORT WAYNE 6, INDIANA

WAREHOUSES* AND SALES OFFICES: *Atlanta, Ga.; *Boston, Mass.; *Chicago, Ill.; Cleveland, Ohio; Dallas, Texas; Dayton, Ohio; *Detroit, Mich.; Indianapolis, Ind.; *Kansas City, Mo.; *Los Angeles, Calif.; Milwaukee, Wis.; *Newark, N.J.; *Portland, Ore.; Upper Darby, Philadelphia, Pa.; *St. Louis, Mo.; *San Diego, Calif.; San Francisco, Calif.

▲ For more details circle **NED-735 K3** on enclosed inquiry slip ▲

Now **Better * than ever**

FLEX-A-FOAM FILTER MASKS

For Safe, Economical Dust Protection

NEWLY designed for better-than-ever comfort and efficiency. It's easier to breathe through and talk through than an ordinary pocket handkerchief — yet filters nuisance dust particles as small as 1/25000 of an inch!

• **Economical** — Only Flex-a-Foam has long-lasting washable filter that outlasts throw-away type by more than 100 to 1. Filter savings alone more than pay total cost of mask.

• **Comfortable** — Self-adjusting to every face size. Can be worn with goggles or spectacles.

• **Simple** — Only four sturdy, long-lasting parts — all interlocking — all unconditionally guaranteed.

* *New frame design positively locks out air leaks, permits speedy removal of filter for cleaning.*

Dust Protection your workers will welcome and *Wear*

FLEX-A-FOAM® FILTER MASK

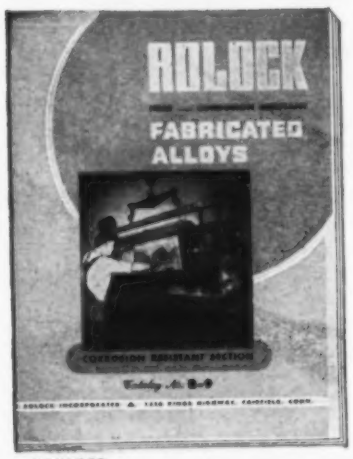
SAMPLE STILL ONLY $1.40 POSTPAID

THE GOGGLE PARTS COMPANY • CLEVELAND 13, OHIO

▲ For more details circle **NED-736 K3** on enclosed inquiry slip ▲

ROLOCK
FABRICATED ALLOYS (HEAT AND CORROSION RESISTANT)

NEW and COMPLETE . . .



specialized reference on Pickling, Degreasing, Galvanizing and other processing operations. Baskets, Manual and Motor-powered Barrels . . . Trunnion, Centrifugal, Bottom-dumping Baskets, Shell Case containers.

• • •

Send for this No. B-9 Corrosion Resistant Section of Rolock's catalog . . . just off the press. It's full of valuable ideas.

11RL52R

ROLOCK, INC.
1412 KINGS HIGHWAY, FAIRFIELD, CONN.

For more details circle NED-737 K3 on enclosed inquiry slip

DIAMOND

ROLLER CHAINS AND SPROCKETS

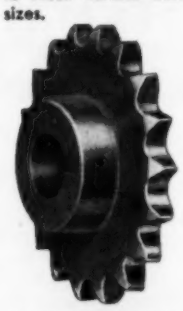
TRADE MARK

Stock Drives for all Popular shaft sizes. For all standard Drive Ratios and H. P. Capacities

The Diamond Chain combination of roller chains, taper bore sprockets and bushings, and the fixed bore sprockets in the small sizes provide for emergency and normal service demands for all standard drive ratios and popular horsepower capacities.

Take advantage of the "over-the-counter" availability of this Diamond stock of Chains and Sprockets for new applications and replacements. This stock is as near as your telephone. See the yellow pages of your classified telephone directory for the address of the Diamond Chain distributor.

BUSHED SPROCKETS—With the Taper Bore Sprocket and Bushing, the bushing is changed to meet various bore sizes.



FIXED BORE SPROCKETS—Small size Diamond finished fixed bore stock sprockets (with keyways and setscrews) give the distributor the balanced stock to meet the widest possible chain drive requirements.

Catalog 753 Mailed on Request

DIAMOND CHAIN COMPANY, Inc.
Where High Quality is Traditional
Dept. 457, 402 Kentucky Avenue, Indianapolis 7, Ind.
Offices and Distributors in All Principal Cities

DIAMOND ROLLER CHAINS

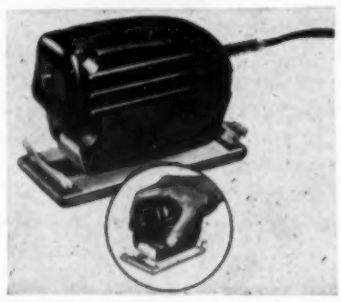
For more details circle NED-738 K3 on enclosed inquiry slip

POWER THREAD GAGING UNIT
bench unit eliminates manual turning

The bench model Rotochek is an electrically - operated gage for checking internal threads by power instead of manual rotation. Gaging assembly is mounted directly on the motor unit, where it revolves at four revolutions a second after the work is brought to the unit. Inward pressure causes the gage to screw into the thread, reverse pressure causes either disengagement of the drive or reversal of the drive as desired. Clutch provides torque control. Standard spindle accommodates AGD tapers 00, 0, 1, and 2, covering a range of thread gages up to 0.510-in. nominal diameter. A larger spindle can also be furnished to include AGD 3 adapters. Special adapters are also available for reversible thread plug members, and for adapting the unit to inspecting externally threaded parts. Made by **Taft-Peirce Mfg. Co.,** 11 Mechanic Ave., Woonsocket, R. I.

For more details circle NED-739 K3 on enclosed inquiry slip

SANDER-POLISHER
straight-line action is featured



Designed to give good control by secure handgrip close to the work, this sander-polisher has a straight-line action with approximately ⅛-in. travel under load at a speed of 240 strokes per second. It is fitted with a snap-lock self-tightening sandpaper gripper, and polishing cloth can be easily substituted for the sandpaper. Sanding area totals 13¾ sq in., and weight is 2½ lb. Housing is of plastic, finished in black, red, or marbled green. Price is $13.95. Made by **Wen Products, Inc.,** 5808 Northwest Highway, Chicago 31, Ill.

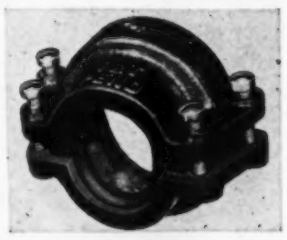
For more details circle NED-740 K3 on enclosed inquiry slip

TWIN TETRODE TUBE
features low power consumption

A low power version of standard type electronic tube, type 6252 twin tetrode tube is particularly suitable for low-drain mobile transmitters and multiplier chains. Maximum plate dissipation rating is 20 watts under ICAS conditions, and it works efficiently with a power output of 12 watts at 600 megacycles. It has been operated successfully as a frequency multiplier over the entire UHF television band. Made by **Amperex Electronic Corp.,** 233 Duffy Ave., Hicksville, L. I., N. Y.

For more details circle NED-741 K3 on enclosed inquiry slip

HEAVY DUTY CLAMP
forms air-tight seal over pipe leaks



Made of two parts joined by four screws, the Bel connector cast iron fitting encloses pipe leaks within captive neoprene gaskets when screws are tightened around pipe. The sealing gaskets form a gas-tight chamber which equalizes pressures inside pipe and out. No pressure is exerted on leak or weak area around it. Joint will withstand intense vibration and acts as an expansion joint in steam and hot water systems. Connectors can also be used to assemble emergency lines of great strength without threading pipe units. They have been tested safe at pressures up to 150 psi. Both the elbow Bel and the straight Bel are available in variety of pipe sizes. Made by **Holoal Mfg. Corp.,** P. O. Box 95, Bellerose 26, N. Y.

For more details circle NED-742 K3 on enclosed inquiry slip

STOP COSTLY HAND LOADING

RITE-HITE Adjustable Loading Docks speed up the flow of material in and out of your plant. Fork or lift trucks move directly from the plant into the carrier, handle material only ONCE. You get increased dock capacity, safety, and efficiency, when you specify **RITE-HITE.**

RITE-HITE requires
√ *No costly machinery* √ *No lubrication*
√ *No fluid or electrical controls*
• *Write for literature*

LOOMIS MACHINE CO.
RITE-HITE DIVISION
Dept. 14 CLARE, MICHIGAN

For more details circle NED-743 K3 on enclosed inquiry slip

where **HEAT** eats metal
paint with **THERMALITE**
and protect up to **1000°**

NEW SILICONE HIGH-HEAT ALUMINUM PAINT FUSES TO METAL . . . PROTECTS AGAINST RUST AND CORROSION

A revolutionary paint development, Thermalite fuses to metal, will not discolor, blister, burn or flake off—even at 1000° heat! Protects against rust, corrosion, chemical fumes. Formulated to stand severe weather exposure as well as high heat.

Ordinary aluminum paints flake off under high heat because the resins burn out. Thermalite's film-forming solids consist of "silicones"—the wonder resin that defies heat, fuses to metal, producing a tough, silver-bright, tightly-adhering coating.

In hundreds of applications industrial users have proved that Thermalite solves their problem of obtaining a paint coating that withstands 400° to 1000° heat. Two types available, one for interior, the other for exterior metal surfaces.

FREE! **. . . to industrial paint users. Your letterhead request brings complete information on Thermalite for interior or exterior use. Write today!**

THE TROPICAL PAINT AND OIL CO. SINCE 1883
1124-1296 W. 70th Street, Cleveland 2, Ohio

For more details circle NED-744 K3 on enclosed inquiry slip

MYSTIK® BRAND
• SELF-STIK

New!

Flexstron
Trademark 6220

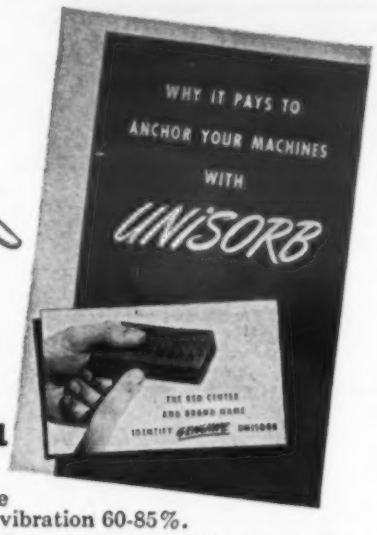
"Tarzan of the Tapes"

cuts packaging costs . . . speeds operations!

Flexible as ribbon . . . Strong as wire! A tough, rubber-fibrous, high tensile filament reinforced tape for heavy duty packaging and packing jobs—strapping, bundling, binding, reinforcing, palletizing. Safe to handle—needs no special equipment—grips instantly—conforms to all shapes—will not cut into cartons. Write for full information and free sample. Mystik Adhesive Products, 2757 North Kildare Ave., Chicago 39.

T. M. Mystik Registered © 1953 Mystik Adhesive Products

For more details circle NED-745 K3 on enclosed inquiry slip



this book shows you how to Reduce machine noise and vibration 60-85%.

Avoid floor drilling by mounting machines the modern way, without bolts or lag screws.

Reduce maintenance costs by eliminating transmitted vibration which damages machines, floors and buildings.

Save time and money when installing new machinery or repositioning present machinery.

Write today for your free copy of "Why It Pays To Anchor Your Machines With UNISORB."

THE FELTERS COMPANY
224 South Street, Boston 11, Massachusetts

UNISORB® MOUNTINGS are used with our special adhesive. UNISORB is also available precoated with adhesive, for use with machines that do not require shimming.

▲ For more details circle **NED-746 K3** on enclosed inquiry slip ▲

Modern way to save money . . . Farquhar medium duty PACKAGE CONVEYOR

Cuts COSTS Boosts PROFITS

IF you're looking for an easier, faster, cheaper way to move bags, bales, boxes, cartons and bundles up to 75 pounds, get this Farquhar Model 436 Package Conveyor on the job and watch your handling costs hit rock bottom!

The Farquhar Model 436 is especially designed for all types of portable or semipermanent materials handling installations. Heavy, two-ply rubber covered belt is 12" wide, carries units up to 75 pounds at standard speed of 78 feet per minute. Belt is supplied with or without cleats. Standard center support provides great stability, may be attached to floor or hung from ceiling. Minimum length 14 ft., maximum 32 ft.

OLIVER Farquhar CONVEYORS

FREE! "Owners Report"—a booklet of case histories describing money-saving Farquhar conveyor installations. Write. The OLIVER Corporation A. B. Farquhar Division Conveyor Dept. O-04 York, Penna.

POWER-BELT & GRAVITY CONVEYORS

▲ For more details circle **NED-747 K3** on enclosed inquiry slip ▲

Which of these Materials Needs More Efficient Handling in Your Plant?

Abrasive solids and chemicals in suspension • Silt
Slag • Acid slurries and sludges • Caustic liquors
Residue from filters and classifiers • Washery solids
Milk of lime • Coal • Tailings • Ore concentrates
Soda ash • Cement and glass sand slurries

Delivered 'round-the-clock (with fewer breakdowns) by

MORRIS TYPE R SLURRY PUMP

Longer uninterrupted service because:
- No internal studs to cause leakage
- Low pressure stuffing box practically eliminates packing troubles
- Impeller and liner removed without disturbing piping
- Moving parts available in various corrosion/abrasion-resistant alloys

Specifications and operation data on request. No cost — no obligation.

MORRIS MACHINE WORKS
Baldwinsville, N. Y.
Representatives in Principal Cities

MORRIS *Centrifugal Pumps*

▲ For more details circle **NED-748 K3** on enclosed inquiry slip ▲

ELECTRIC HOISTS
battery operated for portability

Developed especially for mounting on trucks or for use remote from power lines, battery operated Budgit hoists have 12-v motors and controllers. They can be installed on equipment having 6-v storage battery by adding another 6-v battery in series. Use of double-pole double-throw switch permits parallel connection of batteries so that they are kept charged by normal operation of truck. Hoist capacities are 1000, 2000 and 4000 lb. Made by **Manning, Maxwell & Moore, Inc.**, Shaw-Box Crane & Hoist Div., Park St. & Broadway, Muskegon, Mich.

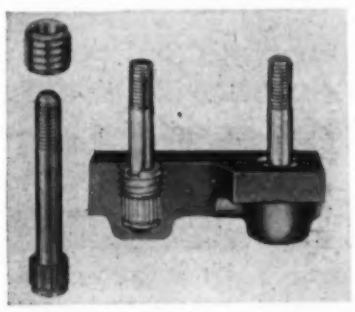
▲ For more details circle **NED-749 K3** on enclosed inquiry slip ▲

SILVER ALLOY
flows easily on tungsten carbide

With good flow characteristics on tungsten carbide, difficult to braze alloys and steels, EutecRod 1602 is a silver brazing-type alloy. It flows well even at elevated temperatures, and will produce braze-type joints on all difficult alloys which have refractory oxides of chromium, nickel, vanadium, etc. It requires but low heat input for T and butt joints where a "white" solder-type alloy is desired on stainless steel. It is available in rod diameters of 3/64, 1/16, 3/32 and 1/8-in. Made by **Eutectic Welding Alloys Corp.**, Dept. P, 172nd St. & Northern Blvd., Flushing 58, N. Y.

▲ For more details circle **NED-750 K3** on enclosed inquiry slip ▲

THREADED STUD
for metal or plastics installation



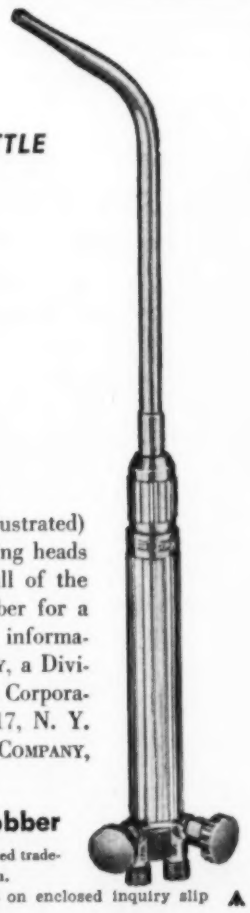
Provided with a positive lock against both rotation and pull-out, this threaded stud is available in cadmium plated alloy steels, stainless steels or special alloys for service with metal or plastic components. The stud itself has a knurled head which broaches its way into the component and prevents rotation, then the pressure ring is screwed into place, locking the stud against pulling out. This pressure ring can be used over and over, and installation and removal are simple. Illustration shows exploded, cut-away and installed views of the device, which is available from stock in standard stud sizes. Made by **Newton Insert Co.**, 1321 E. Seventeenth St., Los Angeles 21, Calif.

▲ For more details circle **NED-751 K3** on enclosed inquiry slip ▲

HERE'S WHY

PUROX Trade Mark

BLOWPIPES *COST SO LITTLE TO USE AND MAINTAIN*



SELF-SEATING VALVES
Reseat scored valves when turned tight.

RUGGED HANDLE ASSEMBLY
Built for long, trouble-free service.

SLIP-FIT "O" RINGS
Perfect gas seals every time.

MIXER IN EACH HEAD
Resists backfires, eliminates burnouts.

SWAGED, PURE COPPER TIPS
Heads snap in handle. No wrench needed.

The Purox W-202 blowpipe (illustrated) is available with 13 standard welding heads and 3 multiflame heating heads, all of the snap-in type. Ask your LINDE jobber for a demonstration or write for further information. LINDE AIR PRODUCTS COMPANY, a Division of Union Carbide and Carbon Corporation, 30 E. 42nd St., New York 17, N. Y. In Canada: DOMINION OXYGEN COMPANY, LIMITED, Toronto.

get it from your LINDE jobber

The terms "Purox" and "Linde" are registered trademarks of Union Carbide and Carbon Corporation.

▲ For more details circle **NED-752 K3** on enclosed inquiry slip ▲

INDIVIDUAL VULCANAIRE DUST COLLECTING UNITS

Are used on surface and other grinders where grinding dust must be removed.

Inexpensive, compact units, with no moving parts. Operated from your present air supply.

Installed in a few minutes, eliminating need for costly centrally located dust collecting systems.

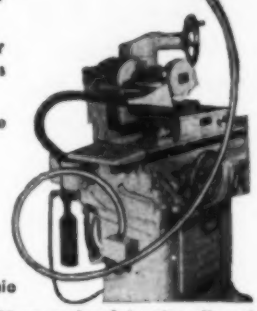
The collector element is mounted on the side of the machine. Quickly cleaned, requiring no refills.

Vac-suction pick-up device (vacuum nozzle) is mounted on the grinding wheel guard or close to grinding wheel on other applications. This mounting permits constant contact with dust as the wheel is moved up or down.

A simple needle valve operates the unit, and can be shut off whenever the machine is not in use.

Available in two sizes: 700 series for grinding wheels 7" dia. or less—200 series for wheels 2" dia. or less.

Made by the makers of Vulcanaire *The* jig grinding attachment.



Write on your letterhead for "Dust Collector" Booklet.

VULCAN TOOL CO.
737 Lorain Ave., Dayton 2, Ohio

▲ For more details circle **NED-753 K3** on enclosed inquiry slip ▲

IF YOUR ANSWER IS "NO" TO ANY OF THESE QUESTIONS THE NESTIER SYSTEM CAN REDUCE YOUR COST OF SMALL PARTS HANDLING

CHECK	YES	NO	NESTIER
Can your present shop boxes be nested to save space?			Yes
Can your present shop boxes be tiered in a rigid stack, efficiently, neatly?			Yes
Are parts visible, easy to withdraw, when boxes are tiered?			Yes
Can you degrease parts without changing containers?			Yes
Are stock fiber liners and dividers available to eliminate parts damage?			Yes
Are your boxes designed for movement by any conveyor, pallet or skid?			Yes
Are your shop boxes easily, safely carried by hand?			Yes
Can your boxes, without shelving, be used as movable stockroom fixtures?			Yes

Yes, THE NESTIER SYSTEM does everything modern shop boxes should do —and WE CAN PROVE IT!

Give us the opportunity and we'll be on the spot to prove how the NESTIER SYSTEM eliminates loss of time, space and motion . . . reduces handling hazards . . . speeds up production.

Write now and we'll have one of our materials-handling engineers arrange for a demonstration in your plant at your convenience.

IT NESTS—IT TIERS
Heavy-gauge steel interchangeable boxes or baskets in two standard sizes.

NESTIER

The Chas. Wm. Doepke Manufacturing Co., Inc.
Rossmoyne, Ohio

5th NATIONAL MATERIALS HANDLING EXPOSITION MAY 18-22, 1953 PHILADELPHIA

BOOTH 714

▲ For more details circle **NED-754 K3** on enclosed inquiry slip ▲

NEW AUTOSET

self-setting hold-down clamps

for presses and machine tools

GUARANTEED NOT TO BREAK!

No packing required—has 3 inter-related surfaces. Tools gripped, can't slip. Malleable castings. Washer attached, preventing misplacement. All sizes in stock.

EXACTO INDUSTRIES, INC.

150 So. Doheny Drive, Beverly Hills, Calif.

Phone BRadshaw 2-5321

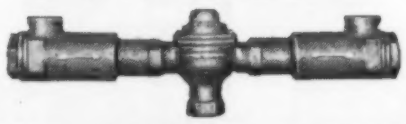
Distributors for Northwest Hose Clamps

• • •

Since 1943—Manufacturers of aircraft clips and clamps conforming to latest AN specifications. Suppliers to airframe manufacturers in the U. S. and Canada: Air Force and Navy. Representatives in principal cities.

▲ For more details circle **NED-755 K3** on enclosed inquiry slip ▲

Completely Dependable Answers to TEMPERATURE CONTROL



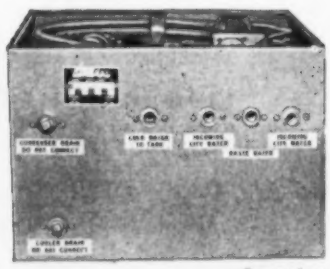
BAR-RAY POSITIVE TEMPERATURE CONTROL VALVE

The unit shown above automatically delivers water at any pre-set temperature, plus or minus 1°.

(a) Can be installed below, above or at side of tank, occupying space of 13⅜" x 2¼" x 4¼".
(b) Capacity 300 gallons per hour at 30 lbs. pressure.
(c) Removable basket-type filters on hot and cold water side with built-in check valves.
(d) Polished chrome-plated brass.

Cat. #B566 $57.00

BAR-RAY WATER COOLER



Rear view

Pictured is one of many Bar-Ray coolers. Small in size, only 12" x 18" x 18", it has giant power and accurate control. Completely water cooled, this unit is designed and engineered to deliver 68° water into the processing tank system, with incoming water at 85°F and ambient temperature at 90°F.

SPECIAL LIQUID COOLING UNITS ENGINEERED AND BUILT TO SPECIFIC REQUIREMENTS

Bar-Ray specializes in the field of automatic and continuous temperature control of water, oils and chemical solutions. A planning service is available, *without charge*, to study the needs of any firm for any type of industrial application, and to work out specific systems to meet special conditions, with the cost no greater proportionally than the cost of standard units.

Write for New, comprehensive catalog

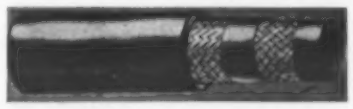
BAR-RAY PRODUCTS, INC.

209—25th Street Brooklyn 32, N. Y.

Telephone: SOuth 8-1020

▲ For more details circle **NED-756 K3** on enclosed inquiry slip ▲

INDUSTRIAL RUBBER HOSE
working pressures 125 to 300 psi



Built with an abrasion-resistant cover that withstands sunlight and weather checking, Vari-Purpose industrial hose is inseparably bonded to compounded oil resistant tube and reinforced with braided rayon cord. Hose withstands deteriorating action of oil, grease, gas, weak inorganic acids and alkalies, acetylene and all paints except lacquers. Sizes range from ¼ to 1½ in. ID, and working pressures vary from 125 psi in the large diameters to 300 psi in the smaller sizes. One, two or three-braid constructions are offered in any desired length or in 500-ft bale quantities. Made by **Hamilton Rubber Mfg. Corp.**, 51 Mead St., Trenton 3, N. J.

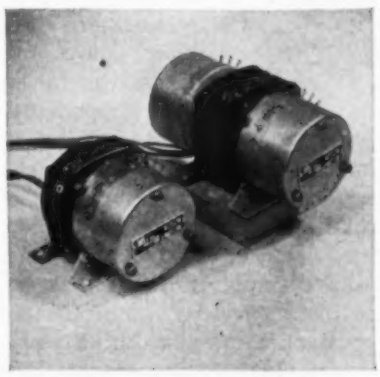
▲ For more details circle **NED-757 K3** on enclosed inquiry slip ▲

PORTABLE SPACE HEATERS
new models added to line

Three new gas-fired portable space heaters have been added to the Bica line. Rated at 85,000 Btu and thermostatically controlled, model T is designed for safe unattended operation and incorporates a thermostat and automatic shut-off. Model W is a combination water and space heater, and is rated at 85,000 Btu input with a capacity of 100 gallons per hour at 125° F. AGA approved, models AD, AF, and AT are each rated at 50,000 Btu input and can be used for permanent or semipermanent installation. Made by **Bica Co.**, P. O. Box 303, Girard, O.

▲ For more details circle **NED-758 K3** on enclosed inquiry slip ▲

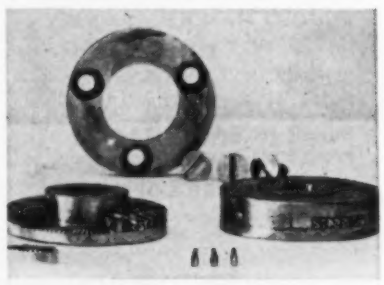
SYNCHRONOUS CHOPPERS
for commutation of ac and dc signals



Available in two models, direct and alternating current synchronous choppers are motor-driven commutator type switching devices. They are designed for commutation of alternating and direct current signals in synchronism with 60 - cycle supplies. Models for switching at 60 or 30 cycles from a 60-cycle source are offered. Life in normal applications is said to be from 5000 to 10,000 hours. As many as eight poles can be switched on one unit. Synchronous drive motor operates on 110-120-v 60-cycle ac. Made by **Instrument Development Laboratories**, 165 Highland Ave., Needham Heights 94, Mass.

▲ For more details circle **NED-759 K3** on enclosed inquiry slip ▲

MARKING ROLLER STAMP
for use in marking machines, lathes



Called the Ramshead Roliner, this steel roller stamp marks metal products speedily and permanently and is intended for use with lathes, marking, and screw machines. Information is varied by means of interchangeable type inserts which are held in place by a quickly removable retainer ring. A blank compensator segment is toothed to engage a matching section in the base of the roller die, and interlocks to make type movement impossible after the retainer has been set in place. Type inserts are of alloy heat treated steel, available in standard styles and in sizes ranging from 1/32 to 5/32-in. by 64ths, as well as in special designs engraved to order. Made by **Acme Marking Equipment Co.**, 8020 Lyndon Ave., Detroit 21, Mich.

▲ For more details circle **NED-760 K3** on enclosed inquiry slip ▲

The Simplest Way to SOLVE SCALE PROBLEMS

PATS. APPLIED FOR

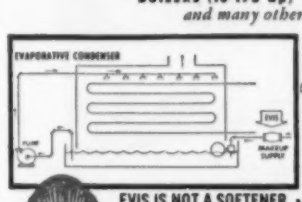
Proven Uses Include
ALL PIPING SYSTEMS
CONDENSERS (most types)
COOLING TOWERS
ENGINES & COMPRESSORS
CUBE & FLAKE ICE MAKERS
BOILERS (to 175 wp)
and many others

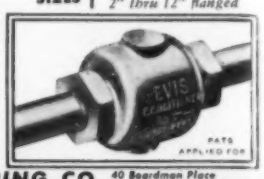
"but bet you!"

EVIS *Water Conditioners are helping industry conquer its costly scale problems. Plant equipment is made to operate at higher efficiency. Maintenance costs are profitably lowered and shut-downs for periodic clean-ups are often entirely eliminated. The EVIS units are Specially Processed to impart a continuous catalytic action on water-solids flowing through it. This action alters physical behavior sufficiently to inhibit most scale formations. Many thousands of EVIS Water Conditioners are now in service.*

Write for further information or ask your Plumbing Supply, Air-Conditioning-Refrigeration or Industrial Equipment Jobber.

SIZES ⅜" thru 2" screwed; 2" thru 12" flanged





PATS. APPLIED FOR

EVIS IS NOT A SOFTENER

Flow Line Type Available for Deep Well Pumps

SOLD ON 90-DAY MONEY-BACK GUARANTEE

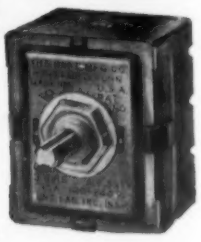
EVIS MANUFACTURING CO. 40 Boardman Place, San Francisco 3, California

FRANCHISED REGIONAL DISTRIBUTORS

WHITTIER (Calif.) KEN-EVIS COMPANY, 11240 E. Whittier, OX 9-2211
SAN BERNARDINO (Calif.) KNUPPE & WRIGHT, 220 E. 40th St., SB 6-7838
SAN FRANCISCO NORTH-EVIS AGENCY, 74 Dorman Ave., MI 7-1822
RENO WATER CONDITIONED SALES CORP., Western Assur. Life Bldg., 2-5639
SEATTLE EVIS-NORTHWEST, 7427 E. Marginal Way, EL 6116
CHICAGO EVIS-GREAT LAKES COMPANY, 205 N. Wabash Ave., ST 2-5948
OMAHA EVIS-MIDWEST, INC., 2504 Dodge St., JA 7044
DALLAS EVIS-SOUTHWEST CO., 6837 Chevy Chase, EM 0137
ATLANTA EVIS-SOUTHEAST CO., 745 Spring St., N.W., VE 0241
PHILADELPHIA EVIS-MIDEAST CO., 4 E. Richmond St., NE 4-0855
ALBANY (New York) EVIS-NORTHEAST CO., 37 Rapple Dr., UN 9-7921
EXCLUSIVE MARINE DIST. MORAN-EVIS CO., SAN FRANCISCO, 420 Market St., DO 2-4363

▲ For more details circle **NED-761 K3** on enclosed inquiry slip ▲

Cut Wiring Time WITH 'DIAMOND H'

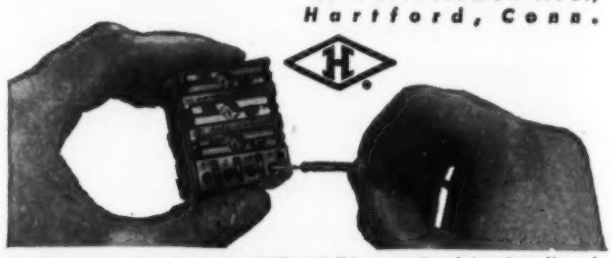


Heater and Motor Rated Rotary Switches

Simplest and fastest method yet devised for wiring up a switch provides instant, automatic, positive connection . . . without binding screws, extra clips or other gadgets. Push the stripped end of your standard wire, solid or stranded, into auto-lock connection of Series 850 Rotary Switches and wire is gripped firmly. Depressing small lever gives instant release.

Compact design permits close cluster or in-line assemblies. Standard, heavy horsepower rating available in off-on, 3-heat, 5-heat, 7-heat, 9-heat and special circuits with one-hole, two-hole or special mounting arrangements. Patent pending. UL Approved. Ruggedly built to give extra-long service. Send us your requirements today. *UL Approved*

THE HART MANUFACTURING COMPANY
204 Bartholomew Ave., Hartford, Conn.



▲ For more details circle **NED-762 K3** on enclosed inquiry slip ▲

SURETY'S SILVERTEX

TOUGH COATING for TOUGH JOBS

Laboratory tests and Industry use show:

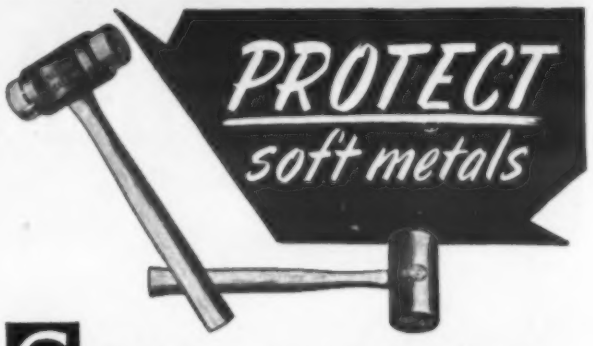
- **Better chemical resistance than rubber or standard synthetics.**
- **Silver coating reflects moderate heat radiation.**
- **Resists cuts and snags.**
- **Won't crack or peel with use.**
- **Curved finger design, swing thumb, all standard sizes, styles.**

Write for complete information.

THE SURETY RUBBER CO. CARROLLTON, OHIO

IN CANADA—SAFETY SUPPLY CO.—TORONTO

▲ For more details circle **NED-763 K3** on enclosed inquiry slip ▲



Garland Rawhide Mallets and Hide-Faced Hammers are made of resilient Water Buffalo Hide, the toughest rawhide known. Will not damage steel, iron, brass, aluminum or other soft metals.

Longer wear and uniformly exact size result from compression under many tons pressure.

Extra faces fit securely without grinding.

Write for free folder listing sizes, weights, and prices.

We will send you the name of your local dealer on request.

Garland MFG. CO. SACO, MAINE

Manufacturers of Rawhide Hammers, Mallets, Loom Pickers

For more details circle NED-764 K3 on enclosed inquiry slip

NOW you can have METERED IDENTIFICATION for

formula, inventory and cost controls

STAINLESS STEEL METER
Inside and Out

STOPS CORROSION PROBLEMS HANDLING FOODS, PHARMACEUTICALS, CHEMICALS, OTHER LIQUIDS

This new Rockwell Type 2BC Rotocycle meter is of all-stainless steel construction; corrosion-resistant, easy to clean. It provides accurate records of quantities of liquids handled which are so important in quality control, scheduling, cost accounting and tax analyses. Quantity Control Registers and Remote Registration Systems are available. Described in Bulletin OG-403. *Write Rockwell Mfg. Co., Dept. C-11,* Pittsburgh 8, Pa.

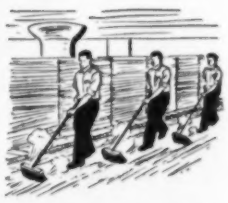
IN CANADA: *Peacock Brothers Limited*

You Can RELY ON ROCKWELL INDUSTRIAL METERS

For more details circle NED-765 K3 on enclosed inquiry slip

Cleans 12 miles of aisles in 6 HOURS!

The new Multi-Clean Motorized Sweeper can be a time and money saver for you just as it is for this large paper products plant. These 8 ft. warehouse aisles, the factory floors, sidewalks, alleys and freight docks are all cleaned in a fraction of the time formerly required by the old fashioned push broom method. Powered by a gasoline engine, the sweeper combines a Palmyra filled rotary sweeping brush 36 inches long and a powerful built-in vacuum unit. With side brush attachment sweeping width is increased to 4 feet.



Took 3 men with push brooms 8 hours to do the job.

Picks up dirt, dust, steel shavings, paper, grass, small metal parts and milling debris. The Sweeper's trouble-free service, easy operation and low price make it the best buy in the motorized sweeper field. For more information write—

MULTI-CLEAN® PRODUCTS INC.
2277 Ford Parkway, Dept. NE-10 St. Paul 1, Minn.

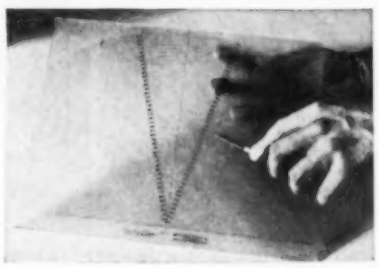
For more details circle NED-766 K3 on enclosed inquiry slip

AMPLIFYING GAGE
diameter capacity is 6 in.

Combining both optical and mechanical principles, the Leitz Opti-Comparitol amplifying gage makes use of a beam of light reflected from a series of mirrors against a translucent screen with a resulting total amplification on the scale of 1000:1. Instrument is set up with a master or gage block, and work pieces passed under the contact tip show their variations, if any, on the screen against a brightly illuminated background. Oversize parts are shown as green and undersize as red. Dial is graduated in 0.00005-in. and has a range of 0.005-in. Diameter capacity is 6 in. Variety of anvils, contact tips, back stops, etc. are available. Available from **George Scherr Co.,** Dept. NED, 200 Lafayette St., New York 12, N. Y.

For more details circle NED-767 K3 on enclosed inquiry slip

COMPARATOR CHARTS
made of plastic with permanent lines



Made of dimensionally stable translucent Vinylite plastic, Perma-Line chart - gages for comparators have fine black lines which will not wear off. Other features are good shadow definition, durability and rigidity for ease of storage and handling. Charts, made as overscreens and 0.050-in. thick, can be easily cleaned. All standard OGP chart-gages are also available as Perma-Line and special charts, or charts from customers' masters can be made in the same type. Rectangular charts can be made up to 20 x 24 in. and round charts can be up to 30 in. maximum diameter. Made by **Optical Gaging Products, Inc.,** Forbes & Salina Sts., Rochester 11, N. Y.

For more details circle NED-768 K3 on enclosed inquiry slip

DO YOU KNOW? Grip-King is a road sanding safety device for passenger automobiles that affords the same safety heretofore available only on trucks and busses. This attachment deposits a layer of sharp, processed grit in the paths of the rear wheels for instant traction on ice or slippery pavements. Unit is controlled from the steering wheel. Attachable to any make of car, unit is made by Tenna-Lite Corp., 312 W. Illinois St., Chicago 10, Ill.

For more details circle NED-769 K3 on enclosed inquiry slip

FOR NAME PLATES THAT REFLECT

Don't underestimate the importance of name plates because the cost is small. Your name plate can mean much—in prestige and in selling effect. If you're proud of your product give it the mark of quality—one of our sparkling metal name plates. Send rough sketch or blue print for design suggestion and quotation, without obligation.

Write for "Etched or Lithographed Metal Products of Quality," with full color examples of our name and instruction plates.

WRITE FOR THIS BOOKLET

CHICAGO THRIFT-ETCHING CORPORATION
1555 N. SHEFFIELD AVE., CHICAGO 22, ILL., DEPT. U
SUBSIDIARY OF DODGE MANUFACTURING CORPORATION, MISHAWAKA, INDIANA

For more details circle NED-770 K3 on enclosed inquiry slip

UNION METAL STEEL SHOP BOXES

..building a reputation for better service

Check these *extra* quality features:

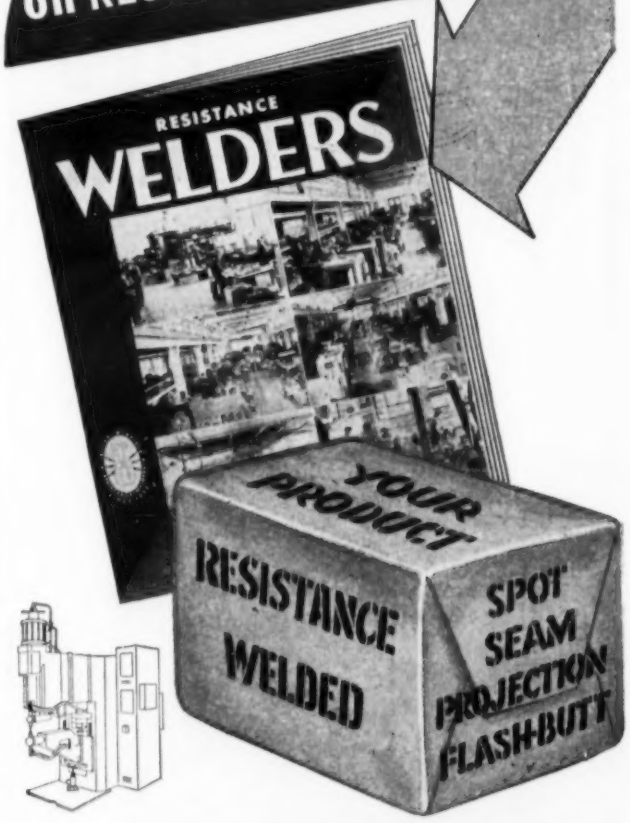
1) Hopper opening is full width of box to simplify material removal.
2) There are no troublesome offsets at hopper end.
3) Heavy gauge, drawn angle, corner reinforcements.
4) Built-in runners extend full length of box bottom.
5) Broad range of sizes and types.

Send for Bulletin MH-807A for information and dimensional data. Address The Union Metal Manufacturing Company, Canton 5, Ohio.

UNION METAL
Material Handling Equipment

For more details circle NED-771 K3 on enclosed inquiry slip

Practical Information on RESISTANCE WELDING



Taylor-Winfield has specific booklets on all phases of resistance welding — spot, projection, seam and flash-butt. The bulletins contain such practical information as: rate of welding; applications; electrical calculations; styles and specifications on welding; classes of welds for different kinds of metal; and, much other specific data. Send your query to Taylor-Winfield and state what kind of information you want. T-W will send you specific bulletins promptly.

Sales and Service

CHARLOTTE
CHATTANOOGA
CHICAGO
CLEVELAND • DAYTON
DENVER • DETROIT
DALLAS
PHILADELPHIA
PORTLAND, OREGON
SEATTLE
S. PASADENA
ST. LOUIS • STAMFORD
WASHINGTON
DUNDAS, ONTARIO

Resistance Welders Since 1898

TAYLOR-WINFIELD
RESISTANCE WELDERS

THE TAYLOR-WINFIELD CORPORATION • WARREN, OHIO

For more details circle NED-772 K3 on enclosed inquiry slip

"Stays flexible in hot oil"
says Line Material Company about TEMFLEX 105

Used as a coil tap lead protector, Temflex 105 Tubing withstands contact with hot transformer oil, and does not crack, shrink or distort in service, according to Line Material Company.

Temflex 105 Tubing — product of Irvington — is UL approved for operation in oil at 90° C. and continuous operation in air at 105° C. The same basic formula is now available in tape form also.

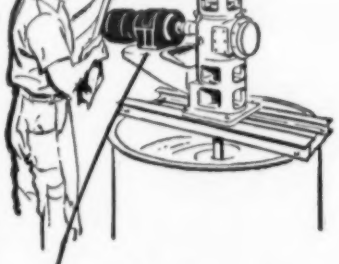
Write for data sheets on Temflex 105 Tubing and Tape

LOOK TO IRVINGTON FOR INSULATION LEADERSHIP

IRVINGTON
VARNISH & INSULATOR COMPANY
14 ARGYLE TERRACE, IRVINGTON 11, NEW JERSEY
Plants: Irvington, N. J.; Monrovia, Cal.; Hamilton, Ontario, Canada

▲ For more details circle NED-773 K3 on enclosed inquiry slip ▲

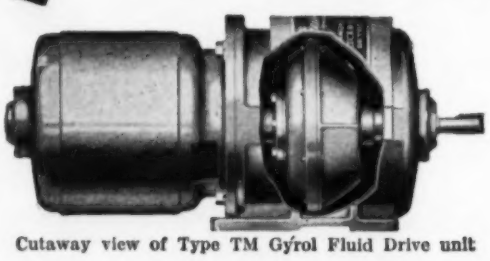
Get smooth power on mixers and agitators with



GÝROL FLUID DRIVE

Smooth and even power can be applied to mixers and agitators when equipped with Gýrol Fluid Drive—thus the risk of mechanical breakdowns and failure of reduction gearing is minimized. Fluid Drive readily permits no-load starting and protects the motor from overload if the mix becomes too heavy. Even when high starting torque is necessary, Fluid Drive and a general purpose motor can fulfill starting requirements. Simple cross-the-line starters can be used. Maintenance saving alone will justify a Gýrol Fluid Drive.

Advantages of American Blower Type TM Gýrol Fluid Drives



Cutaway view of Type TM Gýrol Fluid Drive unit

- Provides smooth flow of power. Shocks are absorbed in a cushion of oil. There's no metal-to-metal contact between driving and driven machinery.
- Offers by its inherent shearpin action, selective overload protection for both motor and driven machinery. Decreases machine "down" time.
- Available as a complete packaged unit suitable for either direct or belt connection to the driven machine. Minimizes alignment problems.

Free trial units are available to original equipment manufacturers

AMERICAN BLOWER
American Blower Corporation, Detroit 32, Michigan
Division of American Radiator & Standard Sanitary Corporation

Serving home and industry:
AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEATS & WALL TILE • DETROIT CONTROLS • KEWANEE BOILERS • ROSS EXCHANGERS • SUNBEAM AIR CONDITIONERS

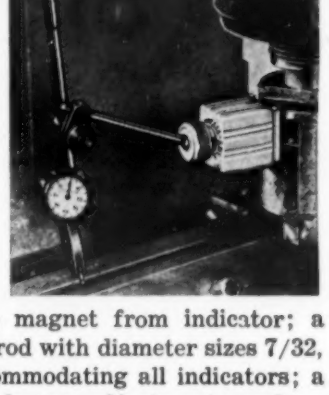
▲ For more details circle NED-774 K3 on enclosed inquiry slip ▲

3-D MAGNIFIER
speeds inspection and assembly work

By incorporating binocular construction, Magni-Focuser facilitates any delicate or precision operation, ranging from inspection to assembly work. Usable with or without prescription glasses, device leaves both hands free to manipulate work. Matched prismatic lenses relieve eye strain and assure true depth perception. Normal vision can be resumed by raising the head slightly. Unit is also practical in the first aid department. Made by **Edroy Products Co.**, Dept. 19, 480 Lexington Ave., New York 17, N. Y.

▲ For more details circle NED-775 K3 on enclosed inquiry slip ▲

MAGNETIC INDICATOR HOLDER
holds to flat or round surfaces



Mounting instantly on flat areas or round surfaces down to ¾-in. diameter this Tiny-Titan No. 100 magnetic base dial indicator holder grips with 65 lb pull. It consists of Tenite plastic case; steel parallel contact surface ribs; brass ball swivel and stem of nonmagnetic material to isolate magnet from indicator; a three-step universal 6-in. rod with diameter sizes 7/32, 1/4 and 5/16 in. for accommodating all indicators; a swivel adaptor for 360 degree adjustment; and an adaptor for attaching 5/32-in. stud type indicators. Made by **Enco Mfg. Co.**, 4524 W. Fullerton Ave., Chicago 39, Ill.

▲ For more details circle NED-776 K3 on enclosed inquiry slip ▲

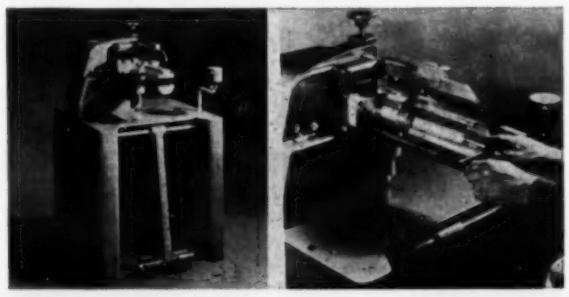
WELDING BENCH
has drawer and shelf partitions

Legs of this 36½ x 36½ in. welding bench are electrically welded into formed sections, this construction permitting it to be free-standing without end or wall support. Fire brick measuring 9 x 4½ x 2½ in. can be installed on the top. Bench is a standard 33⅝ in. high and has an 18 x 22 x 5-in. drawer with choice of lock or padlock attachment and shelf with partitions for holding welding rods. Made by **Industrial Bench & Equipment Mfg. Co.**, 98 South St., New Britain, Conn.

▲ For more details circle NED-777 K3 on enclosed inquiry slip ▲

PLASTIC CYLINDER MAKER
mandrels size automatically

Automatic sizing on this sheet plastic cylinder maker now eliminates crooked seams and misfitting bodies. Auto-size expanding mandrels have range of 2½



to 8½ in. and new sliding gages. Actuated by foot treadle, mandrels and sealing bar are timed so that cylinder is sized to exact dimensions before seam is sealed. Expansion of 1/16-in. brings cylinder to size, and subsequent contraction allows easy removal of cylinder. The 10 x ½-in. sealing bar is electrically heated by thermostatically controlled resistance heater. Made by **Taber Instrument Corp.**, Section 16, 111 Goundry St., North Tonawanda, N. Y.

▲ For more details circle NED-778 K3 on enclosed inquiry slip ▲

What power for fork trucks ?

GET THE FACTS . . . FREE!

Here's your chance to slash through the fog that surrounds the Gas vs. Electric Fork Truck question! Lewis-Shepard's *completely new* digest of manufacturer and user studies gets to the heart of the matter—tells you why electrics are best . . . and *Lewis-Shepards are the best electrics.* Get these facts TODAY. Call your local L-S Representative listed under "Trucks, Industrial" in the Yellow Pages or write direct.

LEWIS-SHEPARD
132-10 WALNUT ST., WATERTOWN 72, MASS.
The Most Complete Line of Materials Handling Trucks

▲ For more details circle NED-779 K3 on enclosed inquiry slip ▲

See How OTHERS Cut Cost with MULTIPRESS

Facts and figures from hundreds of actual users tell *how* the smooth oil-hydraulic power and control of Multipress cuts production costs. Our Data Log reports on these applications may answer some of your own production needs.

Multipress offers fully adjustable *ram speed, pressure and stroke length.* Pressures build up as the ram contacts work . . . *no hammer-blow impact.* Automatic time delay, for ram dwell, and many other types of ram controls, auxiliary feeds, accessories and attachments can be provided with Multipress.

Let us send you DATA LOGS on types of operations your work requires!

The DENISON Engineering Company
1151 Dublin Road, Columbus 15, Ohio

MULTIPRESS

▲ For more details circle NED-780 K3 on enclosed inquiry slip ▲

CONSULT P-S FOR THE BEST *Materials* HANDLING EQUIPMENT

DESIGNED AND MANUFACTURED BY
Palmer-Shile Co.
16015 FULLERTON AVE., DETROIT 27, MICH.

▲ For more details circle NED-781 K3 on enclosed inquiry slip ▲

Need a *Section* or a *System?*

- EIGHT TYPES of gravity conveyors in sizes to meet your requirements.
- Single sections or complete systems planned by skilled engineers.
- Replaceable bearings.

Get the facts from
CONVEYOR SPECIALTY COMPANY INC.
37 Newport Avenue
North Quincy 71, Mass.

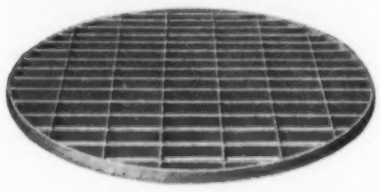
UNUSUALLY PROMPT DELIVERY

Distributors in Major Cities

. Belt Conveyors . Slat Conveyors . Punch Press Conveyors . Unipac Handlers
. Reciprocating Lifts . "Unitable" Belt Conveyors
. Complete Package Handling Systems

For more details circle NED-782 K3 on enclosed inquiry slip

REMOVE THE DANGER OF OPEN AREAS



Here's the Solution!

Blaw-Knox Electroforged Steel Grating is the ideal "coverage" for unprotected pits, light wells, basement stairways and other hazardous open areas. It is a one-piece steel "material" that provides safe footing under any conditions, and admits the maximum of light and air. *Strong . . . Silent . . . Secure.* Thousands of installations are still on the job after 20 years of traffic!

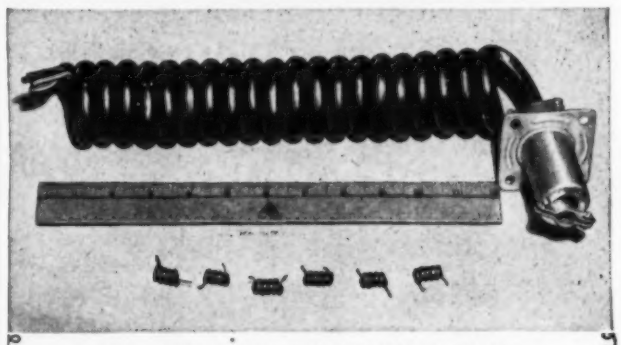
Send us dimensional sketch
We will then forward you price on grating cut to exact size. No nuts, no bolts, no special tools required. Don't delay . . . write today and make those danger spots both safe and usable!

BLAW-KNOX COMPANY
Grating Department
BLAW-KNOX EQUIPMENT DIVISION
2068 Farmers Bank Bldg.
Pittsburgh 22, Pa.
Sterling 1-2700

ELECTROFORGED® STEEL

BLAW-KNOX GRATING

For more details circle NED-783 K3 on enclosed inquiry slip



THE LARGEST AND SMALLEST KOILED KORDS*

HOW WOULD YOU USE THEM?

The largest Koiled Kord made is for use with trailers and has an over-all diameter of 2½". The smallest is only ⅝" long, with an over-all diameter of ¼". It has a single conductor and was made for use in a car heater switch. Between the smallest and the largest, we make innumerable sizes of Koiled Kords for innumerable uses in communications, home and industry. Koiled Kords extend to approximately five times their length and always retract to their original shape and size. *trade mark

HOW WOULD YOU USE KOILED KORDS?

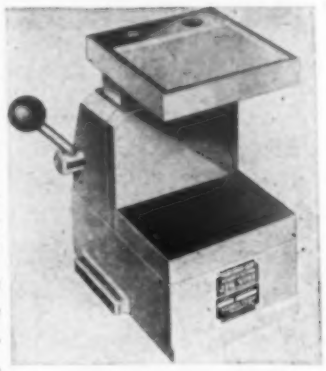
Write on your business stationery for a sample of Koiled Kords.

Koiled Kords INCORPORATED
BOX "K"
HAMDEN, CONN.

IN CANADA: R. D. FLECK & CO., LTD., OSHAWA, ONTARIO

For more details circle NED-784 K3 on enclosed inquiry slip

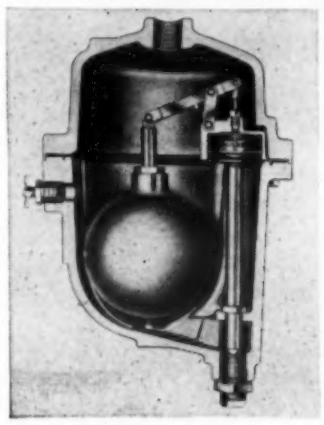
JIG VISE is air powered for fast clamping



Multiplying air line pressure at the clamping point up to 10 times, this air powered jig vise is useful for production drilling, milling, tapping, reaming and other similar operations as well as standard "hard to hold" jobs. Top clamping plate and nesting plates are easily removed and interchangeable. The clamping plates can be drilled for jig bushings, and have recessed tops to concentrate coolant or lubricant. Nesting plates are available in a variety of V-block and solid combinations to meet most shop needs. Air valve control handle can be fitted right or left hand, and the cast aluminum base is fitted with integral clamping lugs. Made by **Suprecision Products,** 2447 Nicollet Ave., Minneapolis 4, Minn.

For more details circle NED-785 K3 on enclosed inquiry slip

AUTOMATIC SUMP DRAIN float operated units simplified



A leakproof cast aluminum float is now incorporated in series 1070 sump drains and moisture separators which have been simplified by elimination of much of the trip mechanism. Units are made to drain accumulations of water and sludge from line sumps, tanks and aftercoolers. While actuated by accumulation of contaminants, actual discharge is by pressure of compressed air in tank or sump to which drain is attached. Float triggers instant release of accumulation by means of device which uses air pressure to open port in bottom. Draining capacity is over 250 gal per hour, and unit can be made with almost unlimited capacity. Made by **Wilkerson Corp.,** 3435 S. Platte River Dr., Englewood, Colo.

For more details circle NED-786 K3 on enclosed inquiry slip

Plastic Production & Products

Yardley Plastics Co.—Illustrations and descriptive data on extrusion injection fabrication, company facilities, plastic tubing of various types, extruded gaskets, plastic shapes, extrusions, injection molding and fabrication, and pipe and fittings are found in 8-page bulletin 150.

For more details circle NED-787 K3 on enclosed inquiry slip

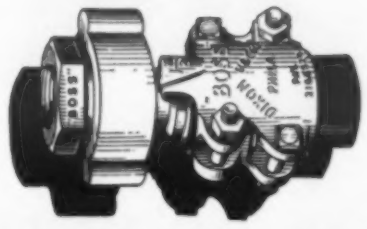
BIN STUCK LATELY?

Loosen it Up—with a CLEVELAND AIR Vibrator
"Write for our new catalog No. 109."

THE CLEVELAND VIBRATOR CO.
2744 Clinton Avenue • Cleveland 13, Ohio

For more details circle NED-788 K3 on enclosed inquiry slip

"BOSS"



WASHER TYPE FEMALE COUPLING
STYLE W-16

For leakproof, durable connections on hose for every service—steam, air, gas, water, oil butane, hydraulics—high or low pressure. Furnished with super-strong "Boss" Offset and Interlocking Clamps. All parts (except washer) steel or malleable iron, rustproofed. Deep corrugations on stem smoothly rounded to prevent damage to hose tubes. Sizes ¼" to 6", inclusive.

From Your Hose Supplier or Industrial Distributor

DIXON VALVE & COUPLING CO.
PRODUCERS OF *The Quality Line* COUPLINGS • NIPPLES • MENDERS • CLAMPS
"BOSS" "GJ-BOSS" "DIXON" "KING" "AIR KING" "DIX-LOCK"
PHILADELPHIA, PA. BRANCHES: CHICAGO • BIRMINGHAM • LOS ANGELES • HOUSTON

For more details circle NED-789 K3 on enclosed inquiry slip

4 jobs better with 1 basic tool!

FORD "*Quad*"
HSS chatterless countersink

Ford's exclusive job-engineered flute design, precise concentricity, greater rigidity, lower cost add up to faster production, better production, more profitable production. No secondary burs. Ideal for heavy duty applications. Write for details.

FORD "*standard*"
chatterless countersink

Engineered by Ford for peak operating efficiency commensurate with lowest possible initial tool cost. Ford's know-how makes possible a competitively priced tool without sacrifice of performance.

FORD -- *the complete line!*
HSS ground cutters, rotary files, countersinks
CARBIDE cutters, end mills, grinding burs

Complete Details, Operating Data
All specifications plus informative operational data on more than 300 FORD rotary tools contained in new FORD Catalogue No. 207. Write for yours!

FORD regrinding service adds tool life, reduces tool costs!

M. A. FORD MFG. CO., INC.
Pioneers in rotary tools for more than 30 years
721 W. River Street, Davenport, Iowa

For more details circle NED-790 K3 on enclosed inquiry slip

faster, more positive selection of stainless electrodes...

this FREE folder helps you choose the right weld metal when welding...

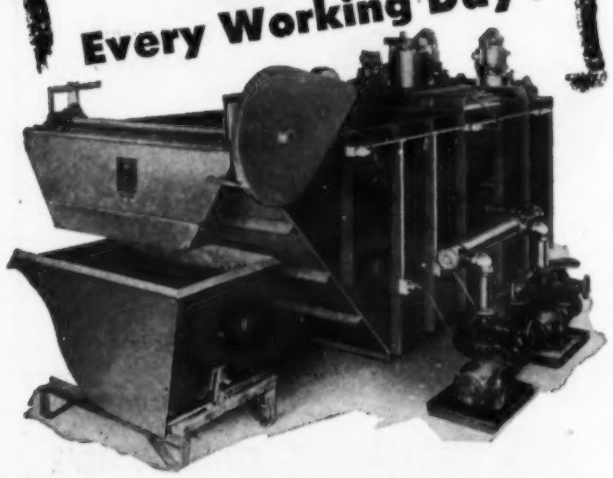
If you do any maintenance or repair welding on stainless steel(s), you'll be glad for this practical information. All you need know is the "A.I.S.I." type, or "trade name" of the steel to be welded . . . or the properties required. The folder quickly tells you the proper electrode to use! It's based upon years of Arcos research and field work that assures you physically, chemically and metallurgically sound weld metal on every job.

- Stainless or Alloy steels
- "A.I.S.I." type numbered steels
- Dissimilar metals
- Stainless Clad steels
- "Trade-named" steels
- To meet corrosion, heat, or strength properties
- SEND FOR YOUR COPY TODAY! Ask for folder, "What Electrode Would You Use?"

ARCOS CORPORATION
1500 South 50th Street • Philadelphia 43, Pa.

For more details circle NED-791 K3 on enclosed inquiry slip

HOFFMAN Equipment Filters 32 Million Gallons of Coolant Every Working Day!



FOR GROUPS OF MACHINES
Hoffman Flotation Units automatically clarify soluble oil coolant in a continuous operation. Eliminates sump cleaning and assures grit-free coolant. Models from 20 g.p.m. to 1,500 g.p.m. flow rates.

Every eight hour shift over ten million gallons of coolants, cutting oil and solvent are reprocessed through Hoffman Filtration Equipment — 32,000,000 gallons every day, in every kind of plant, in every corner of the country to make America's industrial machinery more efficient and productive.

Clean coolant means less frequent dressing for grinding wheels. Grinder down-time is reduced and production rate increased. Grit-free cutting oil means an improved product finish and less wear on costly cutting tools.

Write for factual case studies that show how you can cut operating costs with Hoffman Filtration Equipment.

Ten basic types, as well as many special models, of Hoffman Filtration Equipment are available to solve your filtration problem.

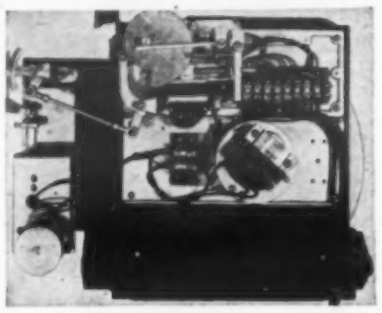
Hoffman engineers will assist with recommendations, surveys and the design of the equipment for your particular filtration need.

Send for your copy of the Hoffman Filtration Equipment Catalog A-943.

TOPS IN VALUE SINCE 1905 Hoffman
INDUSTRIAL FILTRATION EQUIPMENT & SERVICE
U. S. HOFFMAN MACHINERY CORP., 225 LAMSON STREET, SYRACUSE 6, N. Y.
In Canada: Canadian Hoffman Machinery Co., Ltd., Newmarket, Ont.

For more details circle NED-792 K3 on enclosed inquiry slip

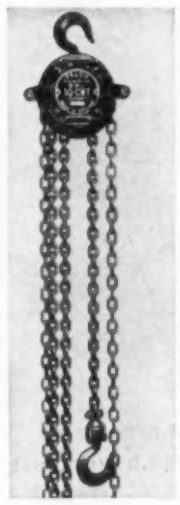
ELECTRONIC FLOW METER
suitable for various purposes



Available in several different models for indicating and recording and with a continuous type mechanical integrator for measurement of the flow of liquids and gases, this electronic type flow meter uses rupture-proof metallic bellows differentials pressure transmitters. It is available for differentials of from 20 to 750 in. of water with a standard static operating pressure of 1500 psig. Higher pressure ratings can be supplied. Transmitter system uses a null balance system independent of line voltage variations, and an electronic amplifier assures maximum sensitvity and response speed. Micrometer zero adjustment is provided, and direct calibration can be incorporated. Made by **Hays Corp.**, 980 Eighth Ave., Michigan City, Ind.

For more details circle NED-793 K3 on enclosed inquiry slip

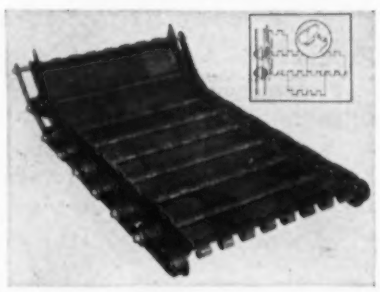
CHAIN HOIST
lightweight steel unit has 10 ton capacity



Available in 11 capacities from ¼ to 10 tons, and in Super and Standard models, this chain hoist is constructed throughout of steel forgings, and is unusually light in weight for capacity. The Standard model has case hardened ground steel bearings and is lubricated by removing four nuts which hold the gear case cover. The Super has needle and roller bearings, and is lubricated by grease fittings and gun without removing the cover. Made in England, hoist is distributed in America by **H. T. Kennedy Co.**, Dept. CL, 37 Wall St., New York 5, N. Y.

For more details circle NED-794 K3 on enclosed inquiry slip

STEEL CONVEYOR BELT
design allows links to be staggered



Standard component links of May-Fran hinged steel conveyor belting for hot or highly abrasive parts have been redesigned to incorporate four interlocking flanges on each side. This provides better stress distribution and allows links to be staggered, eliminating lateral movement between links and scrap fall-through. In addition, the increased precision permits a slightly increased carrying capacity. As before, all links can be furnished solid or with perforations which permit drainage of coolants or other solutions. Made by **May-Fran Engineering, Inc.**, 1711 Clarkstone Rd., Cleveland 12, O.

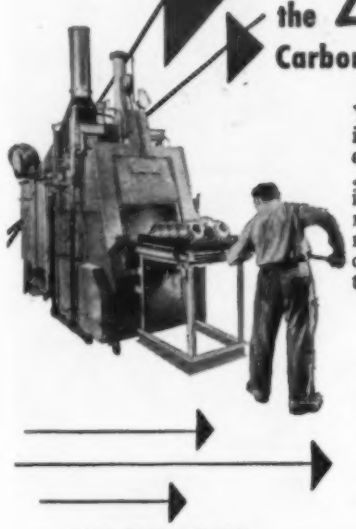
For more details circle NED-795 K3 on enclosed inquiry slip

INDUSTRIAL SPONGE MOP
incorporates self-wringing device

A self-wringing device is feature of Flexi-King industrial sponge mop, operation of which "folds" the mop dry under pressure. Users' hands are thereby protected from detergents or contaminated liquids, and stooping over the pail is eliminated. Models with 14, 11, and 8½-in. heads are available. Four thumb nuts secure the sponge to the metal head so that sponge changes can be made rapidly. In addition to floor cleaning and waxing, mop can also be used for washing and dusting walls, high windows and ceilings. Made by **Flexy, Inc.**, Dept. NE, New Holstein, Wis.

For more details circle NED-796 K3 on enclosed inquiry slip

5 FURNACES IN ONE
the LINDBERG Carbonitriding Furnace



Yes, it's many furnaces in one. It's designed not only for carbonitriding . . but also for hardening, carburizing, annealing, and carbon restoration. It's self-contained . . it's easy to maintain!

Heating is by new type, gas-fired, vertical radiant tubes. They weigh only 29 pounds each, can be changed in two minutes, and usually last two or three times longer than old conventional type radiant tubes.

Ask for Bulletin No. 241

LINDBERG FURNACES
Lindberg Engineering Company • 2482 West Hubbard Street • Chicago 12, Ill.

For more details circle NED-797 K3 on enclosed inquiry slip

HE CAN SHOW YOU HOW TO SAVE TIME AND MONEY

The man who uses brushes in his daily work knows the best when he sees it . . . he just looks for the name "OSBORN". His quick "OK" can be your clue to important savings in purchasing time and cost. All you need to do is put the name "OSBORN" on your order cards.

You can buy OSBORN Brushes *automatically* with confidence because their workmanship and materials are backed by 61 years of OSBORN service to Industry Accepted as the standard of quality today, Osborn Brushes are stocked by leading Industrial Distributors in your area. *The Osborn Manufacturing Co., Dept. Z10, 5401 Hamilton Ave., Cleveland 14, Ohio.*

Write for free Handy Catalog Simplifies specifying of Osborn maintenance and paint brushes.

Osborn Brushes

OSBORN POWER, MAINTENANCE AND PAINT BRUSHES AND FOUNDRY MOLDING MACHINES

For more details circle NED-798 K3 on enclosed inquiry slip

IT'S LIKED MORE BECAUSE IT DOES MORE

LESTO *Electric* **HAND SAW**

Cuts inside holes without drilling a starting hole.

RIP
SCROLL
BAND
JIG
CROSSCUT
COPING
KEYHOLE

Extremely fast for soft and hard wood, soft metal, bone, plastics, hard rubber, cement sheet, pressed wood, etc.

Cuts 2" Wood Beams

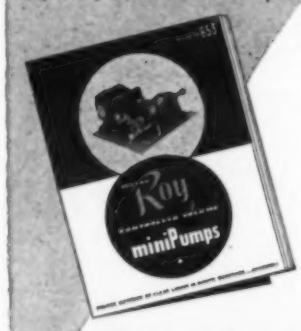
Write for Literature
Sold and Serviced in Principal Cities Throughout U.S.A.
VICTOR J. KRIEG, Inc.
Exclusive Importer
DEPT. C, 611 Broadway, New York 12, N. Y. GRamercy 7-5757
Some Sales Territories Available

For more details circle NED-799 K3 on enclosed inquiry slip

MILTON ROY CONTROLLED VOLUME PUMP CUTS PRODUCTION TIME 50%

• "miniPump"—miniature member of Milton Roy Controlled Volume Pumps, was installed in a plant process operation. It replaced a costly manual process in the pumping of one tenth of a milliliter (1/300 of an ounce) of liquid into open cells on each stroke of the pump. The conversion to automatic continuous injection cut production time 50%—and gave greater accuracy!

These versatile instruments meter any clear liquid in capacities from 3 to 3200 milliliters per hour against pressures up to 1000 pounds per square inch.



• Applications for the pump are varied—ranging from laboratory and pilot plant use to full-scale production operations. They are used as individual units or as components of instrumentation or automatic control systems.

• New Bulletin No. 653 illustrates and describes "miniPump"—its design—construction—uses. Write today for your free copy!

MILTON ROY COMPANY
1304 E. MERMAID LANE • PHILADELPHIA 18, PA.

For more details circle NED-800 K3 on enclosed inquiry slip

PAINT OVER RUST WITH TYGORUST!

"the 'no-prep' vinyl primer"

- minimizes surface preparation
- dries hard in minutes
- goes under any type finish
- provides excellent adhesion
- inhibits rust formation

TYGORUST is a new and unique primer specifically developed to permit the use of TYGON and other vinyl based coatings on rusted ferrous metals. Its outstanding features include easy application — fast drying — high coverage — excellent adhesion to wet or dry rusted steel, wood, concrete, or previously painted surfaces — excellent adhesion for vinyl, nitrocellulose, alkyd, oleoresinous, or bituminous finishes—and, real resistance to rust formation.

359C

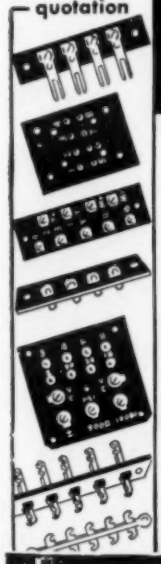
Write for details today — try TYGORUST tomorrow!

U. S. STONEWARE CO.
Akron 9, Ohio

For more details circle NED-801 K3 on enclosed inquiry slip

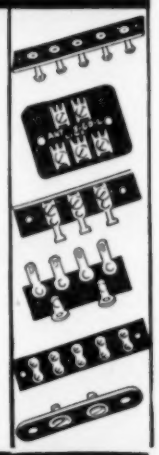
Send your specifications for prompt quotation

Hundreds of standard JONES TERMINAL PANELS Complete Equipment FOR SPECIALS



Several pages of Jones Catalog No. 16 illustrate standard and special panels we are constantly producing. Latest special equipment enables us promptly to produce practically any panel required. Send print or description for prices, without obligation. Hundreds of standard terminal strips also listed. Send for Catalog, with engineering drawings and data.

JONES MEANS Proven QUALITY



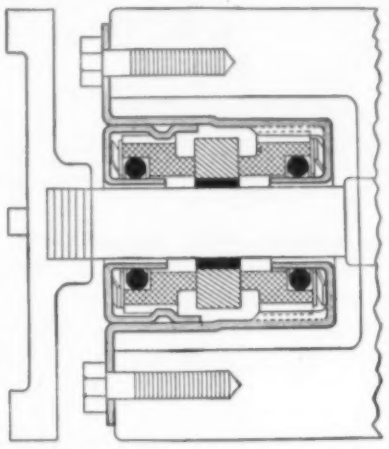
Jones

HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.

For more details circle NED-802 K3 on enclosed inquiry slip

MECHANICAL SHAFT SEAL
double face type is easily installed

Double-face cartridge designed to meet requirements of high pressures, temperatures and revolutions per minute is positive sealing, requires little space, is easy to install and adapts readily to various applications. All parts are contained in a compact housing cup. Stator rings insure close hydraulic balance even when pressure is applied from either side of the seal. It is made of material compounded to seal virtually any liquid or gas. Rotor can be made of various materials. Pressed-in or flanged mountings are available. Made by **Cartriseal Corp.**, 3519 W. Touhy Ave., Lincolnwood 45, Ill.



For more details circle NED-803 K3 on enclosed inquiry slip

FORK LIFT TRUCK
powered by 65-hp engine, it lifts 4000 lb on 24-in. load center

Powered by Chrysler 6-cylinder, 65-hp industrial engine, the D-424 fork lift truck features 4000-lb capacity at 24-in. load center. A Chrysler Gyrol fluid coupling is used in conjunction with Mobilift's multiple disk, oil-immersed clutch and constant mesh transmission. Forward and reverse movement is activated by one push-pull Lev-R-Matic control placed for right hand operation. Another lever controls transmission which gives a high of 11 and low of 5¾ mph, forward and reverse.

Steering is combination ball bearing worm and nut type. One-piece hinged and counterweighted hood, plus sectioned floor and toe boards which are removable without tools, facilitate servicing. Wheelbase of 48 in. and overall length of 82½ in. less forks gives unit 80-in. turning radius. Width is 39 in. Mast height is 83 in. and lifting height, 108 in. Made by **Mobilift Corp.**, Dept. E, 409 S.W. Thirteenth Ave., Portland 5, Oreg.

For more details circle NED-804 K3 on enclosed inquiry slip

get the facts

20 informative pages on CENTRAL VACUUM CLEANING SYSTEMS

LAMSON

Protect plant equipment, personnel, and product with an effective central vacuum cleaning system.

How to figure requirements, schematic layouts, dimension and application tables, installation drawings and photos, and lots more! Your plant needs this catalog.

We have a copy for you... just clip this coupon to your signed letterhead and mail.

LAMSON

LAMSON CORPORATION
210 Lamson St., Syracuse 1, N. Y.
Gentlemen:
Without any obligation on my part, please send me my copy of the Lamson Exidust System Catalog.
Name ..... Title .....
Company .....
Address .....
City ..... Zone ..... State .....

PLANTS AT SYRACUSE, N. Y. SAN FRANCISCO

For more details circle NED-805 K3 on enclosed inquiry slip

Easy wire-pulling
with New G-E WHITE rigid conduit

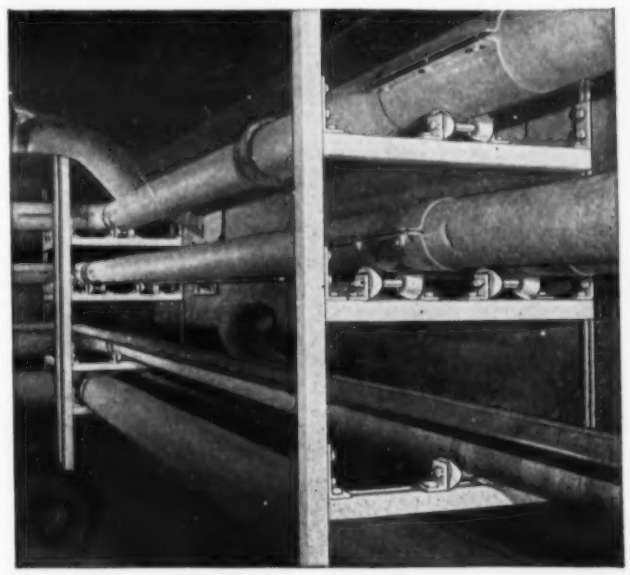
New G-E WHITE rigid steel conduit features easy wire-pulling, easy bending, and improved corrosion protection. This new conduit is lined with a protective coating containing an anti-friction agent that speeds wire-pulling. The exterior is protected by the "metallizing" process, which bonds a controlled, uniform coating of pure zinc to the conduit, threads and all, without hardening it. Try new G-E WHITE conduit on your next job. Section C30-1061, Construction Materials Division, General Electric Company, Bridgeport 2, Connecticut.

New G-E WHITE

You can put your confidence in—
GENERAL ELECTRIC

For more details circle NED-806 K3 on enclosed inquiry slip

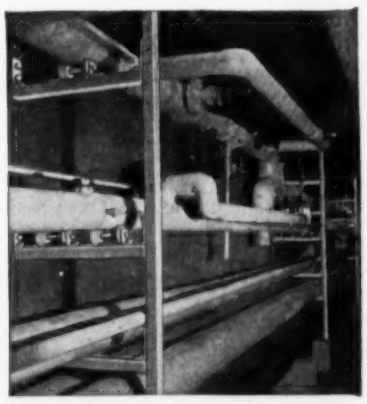
Tunnel job showing how UNISTRUT continuous run concrete inserts can be installed vertically or horizontally, or at any angle required. Note how stanchions are built with UNISTRUT channel and fittings.



install piping runs with Versatile UNISTRUT®
METAL FRAMING

Adjustable Framing System

assures exact pitch, permits changes or additions at any time, eliminates welding, drilling, special tools, or equipment.



Typical piping installation supported by UNISTRUT framing, concrete inserts and roller pipe supports. Slotted channel permits attachment of fittings at any desired point.

Write today for New FREE 84-page Pocket Catalog No. 800—for the MAN ON THE JOB!

DEPT. N10

UNISTRUT PRODUCTS COMPANY
1013 W. Washington Blvd.
Chicago 7, Illinois

UNISTRUT

THE WORLD'S MOST FLEXIBLE ALL-PURPOSE METAL FRAMING

For more details circle NED-807 K3 on enclosed inquiry slip

FASTER GRINDING SPEED CHANGES with Strandflex 4-SPEED GEAR DRIVE FLEXIBLE SHAFT MACHINES

No pulleys to change! No belt slip! You select any of four operating speeds in seconds with simple control on gear drive housing. Two ranges available . . . 850-1800-3600-4500 or 1700-3600-7200-9000 RPM.

Use your Strandflex for grinding, filing, polishing, brushing or many other metal cutting operations merely by changing the tool. Ideal for close-in work or on heavy, bulky pieces because . . . *with Strandflex, the operator lifts only the tool, not the heavy motor. See your dealer for a demonstration.*

FREE DATA SHEET ON FINISHING STAINLESS WELDS tells how to remove surplus welds, how to polish and satin finish. Write for your copy today. Also ask for Catalog 531A illustrating, describing full line.

Strand FLEXIBLE SHAFT MACHINES

FRANKLIN BALMAR CORPORATION
N. A. STRAND DIVISION
Woodberry, Baltimore 11, Maryland
5001 North Wolcott, Chicago 40, Illinois

For more details circle NED-809 K3 on enclosed inquiry slip

Here's a new gearmotor design with added compactness ...efficiency

This new Single Reduction Life-Line Type B Gearmotor features an overhung gearhead design which makes it especially adaptable to many coupled applications such as side-entry agitators.

Taper hardened gears, sturdy housing and anti-friction bearings are a few of the many other unit features . . . features assuring long, trouble-free performance.

These Life-Line Gearmotors are available in ratings from 1 to 30 hp, 780 to 420 rpm, AGMA classes I and II.

Here's a bulletin giving full information on the compactness and efficiency of these new Westinghouse Gearmotors. Sixteen methods of unit mounting are diagramed and explained. They show how Type B Gearmotors can be supplied to suit unusual conditions of space or location of driven equipment.

A copy of this valuable bulletin is yours for the asking. Just drop a line to Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania, and ask for DB 3600-H-1.

J-07336

YOU CAN BE SURE...IF IT'S Westinghouse

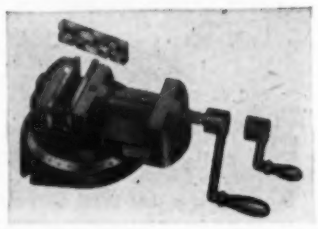
For more details circle NED-810 K3 on enclosed inquiry slip

SOAP LATHER DISPENSER is clogproof and easily maintained

Simple mechanism employed in this stainless steel and chrome-plated metal Bobrick 45 lather soap dispenser delivers metered amount of lathered liquid soap. Force pump action prevents any leakage. Slots in side of unit afford visible gage to view level of soap in transparent shatter-proof Lustrex inner container. Key lock prevents tampering and protects contents. Unit mounts on concealed wall plate which is fastened to wall with screws or with special adhesive. Made by **Bobrick Mfg. Corp.**, Dept. A, 1214 Nostrand Ave., Brooklyn 25, N. Y.

For more details circle NED-811 K3 on enclosed inquiry slip

MILLING VISE with three hard face jaw plates

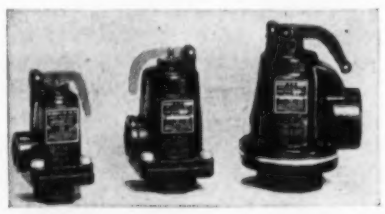


Body of this vibration-free 6-in. milling vise is secured with three bolts to a swivel base which is graduated at 45-degree angle to operator for easy reading. Graduations are from 0 to 90 to 0 degrees. Movable jaw secured by means of slide plate can be locked solid after work is clamped in position. Three hard face jaw plates are furnished as standard. One is milled with V-blocks for round work, both horizontal and vertical, the other two are for conventional work. Vise can be removed from base if desired and has a short and long handle; the former being for fast jaw travel, the latter to lock work. Made by **Kenco Mfg. Co.**, Dept. NED, 5211 Telegraph Rd., Los Angeles 22, Calif.

For more details circle NED-812 K3 on enclosed inquiry slip

PRESSURE RELIEF VALVES for hot water space heating boilers

Larger versions of the McDonnell No. 230, new 1-in. and 1½-in. pressure relief valves are both designed to open at 30 psi and have capacities of 743,400 Btu/hr and 1,025,100 Btu/hr, respectively. Operating parts are of noncorrosive materials, the seat being of brass and the valve disc of a silicone compound. Units are tamper-proof, with pressure settings established at the factory. Independent-action testing lever cannot interfere with automatic operation of valve even if tied down. Valves comply fully with ASME Boiler Code. Made by **McDonnell & Miller, Inc.**, 3500 N. Spaulding Ave., Chicago 18, Ill.

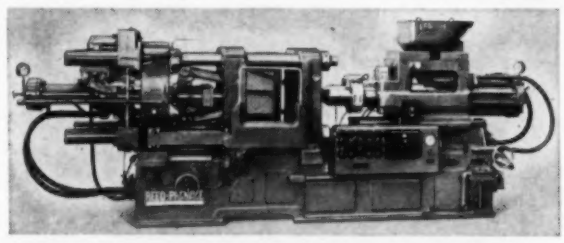


ORIGINAL 230—¾ Inch | NEW 230—1 Inch | NEW 230—1½ Inch

For more details circle NED-813 K3 on enclosed inquiry slip

PLASTIC MOLDING MACHINES have capacities of 20 and 24 oz

Both the 20 and 24-oz models of the 450T plastic injection molding machines develop 450 tons mold locking pressure and provide a 16-in. stroke independent



of mold thickness. Die stroke is adjustable through a mechanism in the toggle cylinder. Heating cylinder plasticizes up to 125 lb of material per hour. A central operating panel controls movement of die plate and plunger and also houses three timers for semi-automatic or automatic operation. Motor, piping and hydraulic equipment are grouped at the rear of the machine to facilitate maintenance. Made by **Reed-Prentice Corp.**, Dept. S, 677 Cambridge St., Worcester 4, Mass.

For more details circle NED-814 K3 on enclosed inquiry slip

For SPECIFIED PERFORMANCE Specify JELLIFF RESISTANCE WIRE

A Wide Range of Alloys . . .
A Wide Range of Experience . . .
Complete Control of Manufacture . . .

make JELLIFF the ideal source of Resistance Wire to assure your Product's PERFORMANCE ACCORDING TO SPECS

Among the Products that can benefit from the PLUS-PERFORMANCE of JELLIFF RESISTANCE WIRE are

precision resistors—rheostats—thermocouples—relays—bridges ohmmeters—high-temperature furnaces.

Detailed Enquiries Welcomed. Address Dept. 11

THE C. O. JELLIFF MANUFACTURING CORPORATION SOUTHPORT, CONN.

For more details circle NED-815 K3 on enclosed inquiry slip

How to double check a dependable Gearmotor

It pays to check both motor and gears when ordering a gearmotor. Each has a vital job . . . they must work as a team. A breakdown of one means a breakdown for both! Westinghouse Life-Line Gearmotors have dependable gear units—dependable motors. They pass the double check.

Check the Life-Line Gear Unit. Gears are taper-hardened for wear resistance and maximum strength—precision hobbed and shaved after heat-treatment for smooth, quiet operation. Positive alignment of gears and shafts with bearing supports an integral part of housing. Positive splash lubrication with protected-type breather and positive oil seals. Split housing for easy access to working parts.

Check the Life-Line Motors. These power-packed motors have factory-sealed bearings . . . need no lubrication! Have steel construction . . . which withstands the knocks of service. Have Tuffernell® insulation . . . which gives added life to windings.

Apply these gearmotors to your tough speed reduction jobs. Specify Westinghouse Life-Line! Call your Westinghouse representative or write Westinghouse Electric Corp., P. O. Box 868, Pittsburgh 30, Pennsylvania. J-07320

YOU CAN BE SURE...IF IT'S Westinghouse Life-Line GEARMOTORS

For more details circle NED-816 K3 on enclosed inquiry slip

Fire-Fighting with CDF DILECTO HORNS

Look around your plant and office . . . you'll probably see examples of C-D-F Dilecto horns on your portable fire extinguishers. The horns are made of layers of fine weave cotton fabric, resin-impregnated, then laminated and molded under pressure and closely controlled heat. Raw materials selection, plus molding technique, produce an extremely strong, seamless horn with a glasslike finish. A brass bushing, or Dilecto insert, can be molded integrally with the base of horn, then later threaded for fastening to the extinguisher. Horns are dimensionally stable, resistant to burning, and are a dielectric that will withstand low sub-zero temperatures. They are lightweight, top-quality products that can be made in a variety of shapes and sizes from 7 7-16" to 32" lengths. Special types can be molded to customer specifications. Delivery is good. Call your C-D-F sales engineer. Write about your molded plastic needs.

THE NAME TO REMEMBER—DILECTO LAMINATED PLASTICS

Continental-Diamond Fibre Company
NEWARK 30 DELAWARE

For more details circle NED-817 K3 on enclosed inquiry slip

No time for this

SAVE LABOR Handle Barrels THIS Way

OLD WAY

An ordinary truck requires two or three men to pick up and move barrels and drums up to 800 pounds.

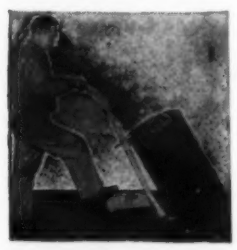
SABIN

ONE-MAN BARREL AND DRUM TRUCK

SIMPLE TO OPERATE. Just run truck up to container, hook on at top and pull back on handle to pick up load. *Exclusive Third Wheel Feature* ensures better balance and added safety in moving loads.

WRITE FOR BULLETIN NO. 48-A

THE SABIN MACHINE CO.
6536 Carnegie Avenue
CLEVELAND 3, OHIO



MODERN WAY

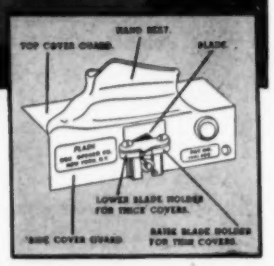
With a Sabin Type "L-3" Truck, ONE MAN does the same job with ease. You save time and cost of helpers.

For more details circle NED-818 K3 on enclosed inquiry slip

Amazing FLASH BOX OPENER

Opens Any Carton Quicker . . . Cleaner

Exclusive patented blade holder adjustable to varying thicknesses of carton covers.



THE ONLY CARTON OPENER THAT GIVES YOU ALL THESE ADVANTAGES:

Penetrates exactly under the outer cover thickness • Protects contents of carton • Cuts clearly to permit re-use • Prevents accidents • Saves time • Eliminates fatigue. *Already accepted by leading industries.*

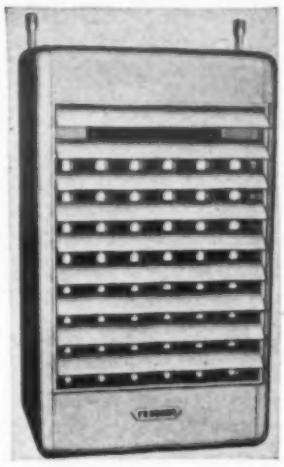
Retail Price
$1.75

FLASH BOX OPENER CO., Inc.
52 W. Houston St. • New York 12, N. Y.

For more details circle NED-819 K3 on enclosed inquiry slip

GAS FIRED UNIT HEATERS

55,000 to 200,000 Btu per hour sizes

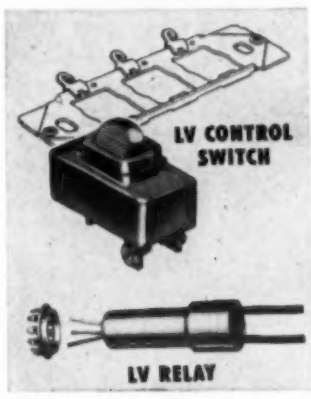


Series 18 gas fired unit heaters are compact, self-contained units housing burner, heat exchanger, fan and automatic controls all in one gray enameled cabinet. Eight sizes are made, with capacities ranging from 55,000 to 200,000 Btu per hour. For operation, it is only necessary to connect gas supply line, hook up electric supply and provide vent. Adjustable louvers direct heat where it is wanted, and controlled heat throw allows general air circulation or controlled spot heating. Hangers have standard pipe thread for quick installations. Made by **Fedders-Quigan Corp.**, Heating Div., Dept. NED, Hancock & Lalor Sts., Trenton 7, N. J.

For more details circle NED-820 K3 on enclosed inquiry slip

CONTROL SWITCHES & RELAYS

components of 24-v switching system



As components of the LV Control 24-v switching system, these control switches and two-coil type relays afford flexibility and versatility. Individual switches mount on standard Despard straps, and any interchangeable type wall plate can be used with them. Key operated switches are also offered for locations where unauthorized switching is not allowed. Relays are rated 20 amp, 120 v ac or 277 v ac for fluorescent loads. In the system, automatic switching of all circuits is possible with master control contactor. All or major circuits can be operated by burglar alarms, photoelectric cells, time switches, etc. Made by **Square D Co.**, 6060 Rivard St., Detroit 11, Mich.

For more details circle NED-821 K3 on enclosed inquiry slip

Press Modernization

E. W. Bliss Co.—For modernization and conversion of Bliss-built presses, 42 standard assemblies have been developed. Typical units are for roller bearing driveshafts, motor-driven slide adjustments, slide counterbalances, various clutch and drive conversions, feeding devices and a conversion from fixed vertical to fixed inclined mounting. "Before and After" views in illustrated bulletin No. 45 help describe some of the possibilities.

For more details circle NED-822 K3 on enclosed inquiry slip

SEL-LOK SPRING PINS *won't vibrate loose*

Use them as hinge pins, use them to fasten gears, pulleys and sheaves to steel shafting, use them to replace keys, keyways and cotter pins—they won't work loose. For complete information, write STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

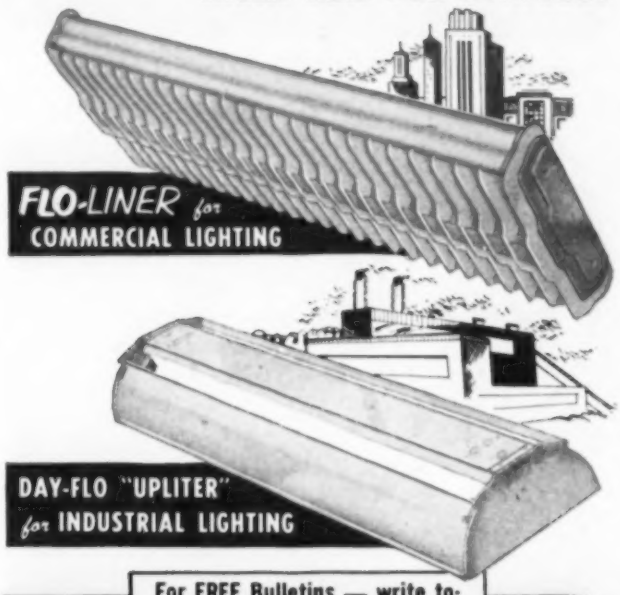
Sel-lok spring pins are shock resistant and vibration proof • eliminate expensive reaming operations • replace tapered or grooved pins • easy to insert and remove • reusable • accurate in diameter and length • reduce installation costs • lighter in weight and as strong as a solid cold-rolled steel pin of the same diameter • available in a full range of lengths and diameters

SEL-LOK SPRING PIN DIVISION sps
JENKINTOWN PENNSYLVANIA

For more details circle NED-823 K3 on enclosed inquiry slip

Whatever your Lighting Requirements...

THERE'S A *Wheeler* FIXTURE THAT'S RIGHT FOR YOU *and the* JOB!



For FREE Bulletins — write to:

Wheeler REFLECTOR COMPANY
275 CONGRESS STREET — BOSTON 10, MASS.
Distributed Exclusively Through Electrical Wholesalers

For more details circle NED-824 K3 on enclosed inquiry slip

This camera helped speed production of PYREX casseroles

The solution to production problems may sometimes be right in front of your eyes, yet can't be seen because the operation in question is moving at high speed.

Corning Glass Works' engineers had just such a problem in machining a new high-heat-conductivity alloy into dies that were expected to press molten glass into Pyrex casseroles faster and more economically. When trouble in machining this alloy made its use doubtful, the engineers decided they wanted a look at the tool bit as it operated at 246 r.p.m. Their Kodak High Speed Camera gave it to them.

This camera takes motion pictures at speeds up to 3200 frames a second, slows motion as much as 200 times when the films are projected at normal speed. Study of their film showed Corning engineers that chips were sticking to one side of the tool bit, even though the tool was new. Further grinding was tried, and another study clearly showed the problem was solved. The special alloy *could* be properly machined, and the camera had helped show how.

Corning's high speed camera keeps busy finding answers to all sorts of problems involving mechanical action too fast for the eye to see.

A new booklet, "High Speed Motion Picture Making In Industry," is now available. It gives you complete details on the Kodak High Speed Camera, and shows how a number of industries have used this versatile instrument to solve difficult product design and performance problems. For your copy, write to:

Industrial Photographic Division
EASTMAN KODAK COMPANY
Rochester 4, N. Y.

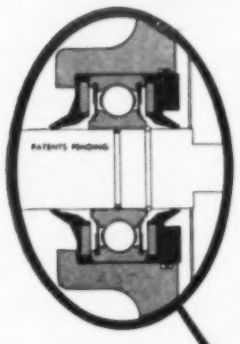
the Kodak *HIGH SPEED* Camera

Kodak

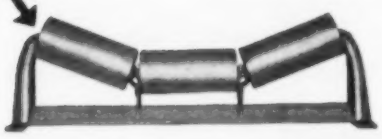
For more details circle NED-825 K3 on enclosed inquiry slip

STOP BELT CONVEYOR LUBRICATION COSTS

TRAN-SEAL IDLERS NEVER NEED RE-LUBRICATION



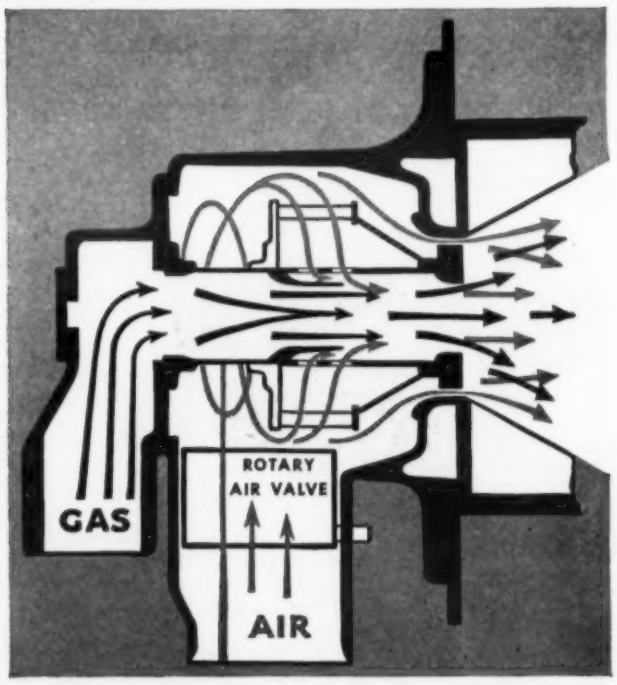
This Transall Tran-Seal heavy-duty Belt Conveyor Idler is *service-proven*. It is factory lubricated and never needs re-lubrication. Improves service, longer life, reduces maintenance cost. For details, write TRANSALL, INC., 120 N. 11th St., Birmingham 4, Alabama.



Each bearing assembly is protected by four bearing seals.

TRANSALL SECTIONAL BELT CONVEYOR SYSTEMS

▲ For more details circle NED-826 K3 on enclosed inquiry slip ▲



VORIFLOW® gas burner

. . . another cost-saving feature of

Powermaster®

PACKAGED AUTOMATIC BOILERS

- Keeps fuel cost DOWN and boiler efficiency UP.
- Infinitely variable combustion modulation responds instantly to load demands from 30% to 100% of firing capacity—*with full efficiency!*
- Immediate change-over to alternate fuels is provided with combination units.

NEW BULLETIN . . .

describes and illustrates *all* cost-saving features of the Powermaster. Send for a copy of Bulletin 1219 today.

ORR & SEMBOWER, INC.

930 Morgantown Road, Reading, Penna.

BUILDERS OF COST-SAVING BOILERS SINCE 1885

▲ For more details circle NED-827 K3 on enclosed inquiry slip ▲

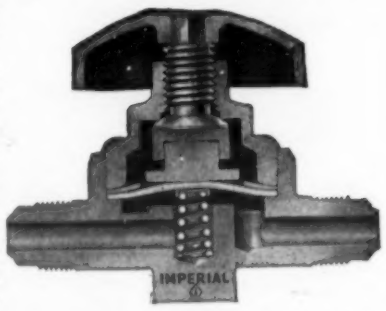
BAND-TYPE CLAMP
for round or irregular objects

For clamping and holding round or irregular shaped objects, style No. 62 Jorgensen band clamp has a 2-in. wide canvas or steel band which encircles the object and is drawn tight by a screw fixture. Canvas band strength is approximately 2800 lb, and is always supplied unless otherwise specified, since the steel band should only be used on round shapes. Self-locking cams hold the band as the load is applied, and extensions are provided for quick release. Standard band lengths range between 10 and 30 ft. Made by **Adjustable Clamp Co.,** 417-ND N. Ashland Ave., Chicago 22, Ill.

▲ For more details circle NED-828 K3 on enclosed inquiry slip ▲

PACKLESS SHUTOFF VALVE
for vacuum and instrument work

Especially adapted for vacuum applications, instrumentation, processing, pneumatic service, and similar industrial service this Red Head packless shutoff valve has a solid Teflon diaphragm. Valve gives positive shutoff with easy fingertip operation and will withstand unlimited openings and closings. It handles pressures up to 300 psi and holds full vacuum. Temperature range is −100 to 450° F. It is available with 45-degree flare or solder connections for tubing in sizes from ¼ to ⅞-in., and in ⅜ and ½-in. female pipe connections. Styles include both tube-to-tube straight-through valve and angle valve with tube-to-pipe thread. Made by **Imperial Brass Mfg. Co.,** 510 S. Racine Ave., Chicago 7, Ill.



▲ For more details circle NED-829 K3 on enclosed inquiry slip ▲

INDUSTRIAL SAFETY MIRROR
for mounting at intersections

Recently added to the Klear-Vu line, this 24-in. diameter circular convex glass safety mirror is designed to eliminate traffic accidents by providing vision around corners and at blind intersections. Unit is mounted at a height of from 8 to 10 ft on a 3-in. swivel stud assembly and mounting bracket (shown inset). It can be used in or outdoors. Made by **Lester L. Brossard Co.,** Dept. NED, 540 N. Michigan Ave., Chicago 11, Ill.

▲ For more details circle NED-830 K3 on enclosed inquiry slip ▲

OSCILLOGRAPH TUBES
feature fine trace detail

Electrostatic focus, electrostatic deflection and post-deflection acceleration are utilized in the 5AB series of 5-in. flat face cathode ray tubes. Three units differ only in the spectral energy emmission and persistence characteristics of their phosphors. They have high sensitivity and low capacitance in the pair of deflecting electrodes provided for vertical deflection. These characteristics make this pair of electrodes well suited for operation from wide band amplifiers. Maximum length is 17⅛ in. and maximum diameter is 5 11/32 in. Made by **Radio Corp. of America,** RCA Victor Div., Tube Dept., Harrison, N. J.

▲ For more details circle NED-831 K3 on enclosed inquiry slip ▲

Aeroquip

SLIDE-SEAL COUPLINGS

PUSH-PULL

to connect and disconnect fluid-carrying lines

Compact, low cost Aeroquip Slide-Seal Couplings connect and disconnect fluid-carrying lines *instantly* assuring full flow of fluids when connected and perfect seal of each half when disconnected.

AEROQUIP CORPORATION, JACKSON, MICHIGAN

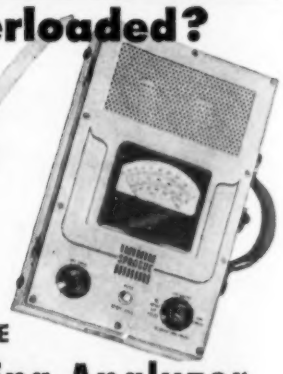
FLEXIBLE HOSE LINES • DETACHABLE, REUSABLE FITTINGS • SELF-SEALING COUPLINGS • BREAKAWAY COUPLINGS • HYDRAULISCOPE

AEROQUIP PRODUCTS ARE FULLY PROTECTED BY PATENTS IN U.S.A. AND ABROAD

▲ For more details circle NED-832 K3 on enclosed inquiry slip ▲

Wiring Overloaded?

CHECK IT!



...WITH THE SPRAGUE

Adequate Wiring Analyzer

This compact Sprague instrument checks wiring to see if it's adequate for present or contemplated loads.

See the effect of increasing loads on wiring *right at the spot!* Direct reading meter indicates percentage voltage drop on 115 or 230 volt circuits under load *without troublesome calculations.*

Connectors for convenience outlets, equipment, panel boards, etc. are furnished—ideal for industrial, utility, and field use.

Write for Bulletin PF-600

SPRAGUE ELECTRIC COMPANY

183 Marshall Street, North Adams, Massachusetts

SPRAGUE

PIONEERS IN ELECTRIC and ELECTRONIC DEVELOPMENT

▲ For more details circle NED-833 K3 on enclosed inquiry slip ▲

WESTLINE

INDUSTRIAL SAFETY SIGNS

The Economical Way to SAFETY FIRST!

Costing only a few cents each, WESTLINE SAFETY SIGNS can be applied to any smooth surface—glass, cement, metal, wood, etc. *Pressure-sensitive,* they do not require moistening—stick permanently with finger-tip pressure.

Anyone can put up WESTLINE SAFETY SIGNS—skilled help is not necessary—no more screws, bolts, drilling or painting. Just strip off backing and apply—will not curl, pop, peel or crack. Leave up permanently or peel off after need has passed—will not mar surface.

WESTLINE SAFETY SIGNS are made of durable fabric and resist moisture, dirt, etc.—use indoors or out.

Based on National Safety Council and A.S.A. standards, WESTLINE SAFETY SIGNS are available in over 200 stock descriptions and are also made on special order.

Write today for free samples and specifications

WESTLINE PRODUCTS DIVISION

WESTERN LITHOGRAPH CO.

600 East Second Street, Los Angeles 54, California

▲ For more details circle NED-834 K3 on enclosed inquiry slip ▲

VOLTS and AMPS at a glance with the COLUMBIA

Complete with Voltage Leads and Carrying Case

A. C. TONG TYPE VOLT-AMMETER

• Quickly • Accurately • Safely

Columbia Type AC-1 provides ampere readings with a snap by merely clamping jaws around the electrical conductor, without breaking circuit or insulation. Voltage readings are taken quickly and easily with safety plug-in leads. This instrument is one of the Columbia line of tong type instruments of the highest quality and dependability.

TYPE AC-1 FEATURES

- Measures up to 600 Amperes and 600 Volts.
- Amperes: 0/12/60/120/-600 A.C.
- Volts: 0/150/600 A.C.
- Convenient Range Switch.
- Insulated Jaws will accommodate Conductors up to 1½" diameter, Bus Bars up to 2" x ½".
- Accuracy: 3% full scale.
- Light Weight—Fits Easily into Pocket.
- High Quality at Low Cost.

Inquiries Invited from Distributors • Write for Descriptive Bulletin AC-25

COLUMBIA ELECTRIC MFG. CO. 4525 Hamilton Ave. Cleveland 14, Ohio

▲ For more details circle **NED-835 K3** on enclosed inquiry slip ▲

SpeedMaster portable electric drills are designed and built to stand up under continuous operation at full capacity. They have sealed ball bearings throughout; have broad face gears cut on centers, and every standard, industrial quality feature. They also have the special SpeedMaster advantages of: extra power; cast-in frame supports, bracing, cooling system, etc. —nothing to loosen or rattle; as well as SpeedWay's lighter weight, handiness and in-line thrust that makes straight drilling natural.

SPEEDWAY STANDARD DUTY DRILLS

These handy, economical drills are the logical drills for maintenance, construction, installers and service men. Cast-in aluminum construction. More power per pound than ordinary drills. They will give lifetime service.

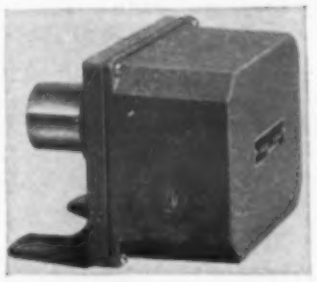
Write for Catalog

SpeedWay MANUFACTURING CO. 1892 South 52nd Ave. Cicero 50, Illinois

▲ For more details circle **NED-836 K3** on enclosed inquiry slip ▲

▲ For more details circle **NED-837 K3** on enclosed inquiry slip ▲

PHOTOELECTRIC CONTROL operates when light beam is broken



Interruption of the light beam or failure of a lamp or tube de-energizes the plate relay in this Type F photoelectric control to open or close a circuit. For protective type applications such as bin or liquid levels, travel limits, smoke detection, etc., the instrument has a quick-response direct current circuit with speeds to 1200 operations a minute. Other features include sensitivity adjustment and complete enclosure in splashproof, cast aluminum case. It can be supplied with either built-in or remote photoelectric head and a wide selection of light sources. Plate relay contacts are SPDT, rated 15 amps at 115-v ac. Made by **Autotron Co.**, P. O. Box 722-D, Danville, Ill.

▲ For more details circle **NED-838 K3** on enclosed inquiry slip ▲

HIGH SPEED ATTACHMENT for flexible shaft machines

Spindle speeds on Strand flexible shaft machines can be increased to three times the rated speed of the motor by an attachment intended for use with carbide rotary files and cutter and high speed steel tools. With step-up gears built into the attachment rather than in the hand piece, the latter is light in weight and easy to control. When used with a Strandflex four-speed gear drive flexible shaft machine, the attachment provides a choice of eight spindle speeds. Top speeds range from 13,500 to 36,000 rpm, depending upon with which machine the attachment is used. Made by **Franklin Balmar Corp.**, N. A. Strand Div., Dept. N, Woodberry, Baltimore 11, Md.

▲ For more details circle **NED-839 K3** on enclosed inquiry slip ▲

ALUMINUM GAS METER resists atmospheric corrosion

Having rated capacity of 415 cfh, this die-cast aluminum gas meter weighs less than one-third as much as conventional cast iron meters of comparable capacity. Features include single sealing flange between cover and body, enclosed valve plate and oil-impregnated powder-metal bearings. Ease of handling and freedom from atmospheric corrosion are added advantages. Made by **Rockwell Mfg. Co.**, Dept. NED, 400 N. Lexington Ave., Pittsburgh 8, Pa.

▲ For more details circle **NED-840 K3** on enclosed inquiry slip ▲

▲ For more details circle **NED-841 K3** on enclosed inquiry slip ▲

When a touch on a button moves weldments like these into the correct, most convenient position for a down hand pass, you get more arc time, more welding at lower cost. C-F power operated Positioners rotate the work in a full circle at any point in a range of 135° from the horizontal — giving welders a choice of an infinite number of downhand welding positions instantly.

Every requirement for faster, better positioned welding — constant or variable speed table rotation, full 135° tilt, self-locking gearing which holds the table in any position, oversize built-in main tilt and rotating bearings, choice of two base styles, and many other features — are built into C-F Positioners.

C-F Positioners are available in Hand or Power operated models, and are made in capacities up to 30,000 lbs. and larger.

Write for the new C-F Positioner Catalog.
CULLEN-FRIESTEDT CO., 1304 S. KILBOURN AVE.
CHICAGO 23, ILLINOIS

CULLEN-FRIESTEDT CO., CHICAGO 23, ILL. C-F positioned welds mean better, more economical welds

▲ For more details circle **NED-842 K3** on enclosed inquiry slip ▲

Division of
AMERICAN GAGE and MACHINE CO.
SIMPSON ELECTRIC COMPANY SIZE CONTROL COMPANY
WALSH PRESS & DIE COMPANY

▲ For more details circle **NED-843 K3** on enclosed inquiry slip ▲

Chicago MOUNTED Wheels

...now even better with 79E BOND

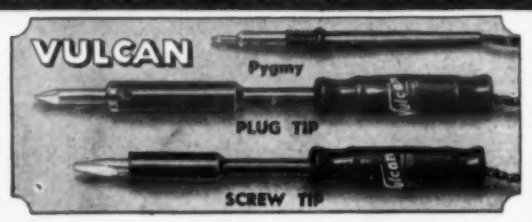
Buy Chicago Mounted Wheels—bonded with 79E Bond—and you'll never use any other!

79E—a tough new bond exclusive with Chicago Wheel—is the sensation of the industry . . . it does a BETTER grinding, burring, and finishing job FASTER. A size and shape for every use. Deliveries are excellent—Order today.

CHICAGO WHEEL & *Mfg. Co.*
Dept. NED • 1101 West Monroe Street, Chicago 7

For more details circle NED-844 K3 on enclosed inquiry slip

VULCAN
ELECTRIC SOLDERING TOOLS



A Complete Line

of fine professional Electric Soldering Tools. Three types. 18 sizes, from 1¾" diameter tip for the heaviest soldering to ⅛" tip for the most delicate work. Tips are of finest forged copper (Catalog will be sent by return mail)

LENGTHEN THE LIFE of your Soldering Tools with Vulcan DUREVER (ironclad) Soldering Tips of pure forged copper with a special metal coating that protects the copper from corrosion and oxidation. DUREVER Tips outlast ordinary copper tips, do away with dressing and filing. (Ask for folder that tells why.)

VULCAN ELECTRIC CO.
Danvers 7, Mass.

Vulcan Electric Soldering Tools, Solder Pots, Glue Pots, Branding Irons. Vulcan Electric Heating Elements. Vulcan Electric Heating Devices.

For more details circle NED-845 K3 on enclosed inquiry slip

SHENANGO *Centrifugal* CASTINGS ... KEY TO SAVINGS

Bring down overhead the SHENANGO way!

Centrifugally cast Meehanite Metal rams for meat rendering presses. The finer, more evenly dispersed graphite flakes in these Shenango cast Meehanite Metal parts avoid stress concentrations and permit finer finishing.

Here are two reasons why Shenango parts will cut costs for you:

First, the high-strength, pressure-dense castings produced by Shenango's centrifugal process . . . castings free from sand inclusions, blowholes and other defects . . . are keeping work stoppage, lost production and premature part failure to a minimum for Shenango users everywhere.

Secondly, modern facilities and skilled workmen at Shenango turn out precision-machined parts *exactly* to your specifications. A real saving in time and money over parts that *almost* fit perfectly.

Send for free bulletins. All sizes and types of symmetrical parts are produced by Shenango in rough, semi- or precision-machined finish. Bulletin No. 150 covers nonferrous metals; Bulletin No. 151 covers Meehanite Metal, Ni-Resist and special iron alloys. *Write to . . .*

SHENANGO-PENN MOLD COMPANY
Centrifugal Castings Division
Dover, Ohio
Executive Offices: Pittsburgh, Pa.

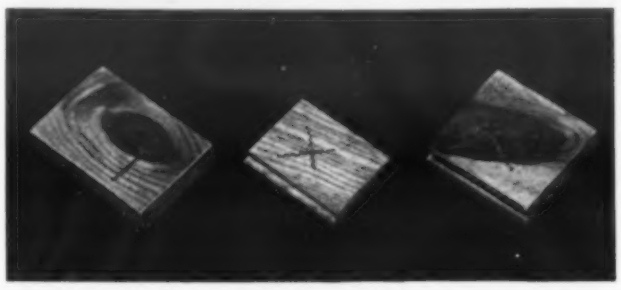
SHENANGO

ALL RED BRONZES • MANGANESE BRONZES • ALUMINUM BRONZES
MONEL METAL • NI-RESIST • MEEHANITE METAL

For more details circle NED-846 K3 on enclosed inquiry slip

WOOD PARTS SPLICER
makes fasteners from ribbon stock

The sample oak wood blocks illustrated show how the corrugated metal fastener driver can be used to splice wood. Machine used cuts its fasteners direct



from ribbon stock, and will drive fasteners with four to eight corrugations and from ¼ to ¾ in. wide with plain or saw edges. Fasteners can be driven flush or embedded in the boards being spliced. A sample wood block will be sent on request to **Saranac Machine Co.,** Dept. SCF21B, Benton Harbor, Mich.

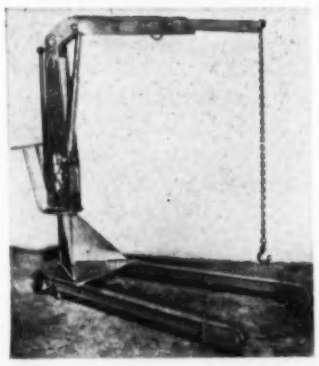
For more details circle NED-847 K3 on enclosed inquiry slip

DRUM & BARREL TRUCK
drum pick-up is made easy

Steel welded, self-loading and unloading hand truck uses double-ended, spring action chime hook to fit drums and barrels. This device, coupled with floating axle allows operator to pick up drum without first tilting it. Operator tilts truck to engage chime hook, then pulls down on truck handles. Drum automatically slides onto forks. Truck rests at slight angle to provide maximum drum or barrel drainage, and stands upright for safe, easy storage. Semisteel or vulcanized-on rubber tread wheels are offered. Made by **Bond Foundry & Machine Co.,** 306 Penn St., Manheim, Pa.

For more details circle NED-848 K3 on enclosed inquiry slip

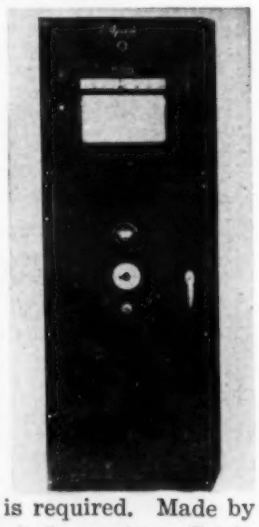
PORTABLE SHOP CRANE
rated capacity is ½-ton



Recently introduced Hydro-Lift ½-ton model mobile shop crane is narrow enough to pass through a 36-in. door, being only 33 in. wide at its base. Easily operated, it can be converted for use as a truck crane. Four wheels give it stability. Optional attachments include transmission attachment, cab-over-engine attachment, extra length booms and electric power unit. Crane can be purchased without base for truck use only. Made by **Star Machine & Tool Co.,** 215 S.E. Sixth St., Minneapolis, Minn.

For more details circle NED-849 K3 on enclosed inquiry slip

DEW POINT CONTROLLER
for heat treating furnaces



Atmosphere dew point can be regulated in controlled atmosphere metal treating furnaces by the self-contained automatic dew point controller. Unit operates electronically and records continuously. It makes possible completely automatic carburizing and carbon restoration cycles. Instrument is adjustable to meet any required dew point within furnace capacity. Unit is housed in a cabinet measuring 13 x 24 x 72 in. and has a separate control valve that is easily attached to regular atmosphere control panels. No calibration is required. Made by **Ipsen Industries, Inc.,** S. Main & Ipsen Ave., Rockford, Ill.

For more details circle NED-850 K3 on enclosed inquiry slip

NOW! Welding Goggles That Reduce Fogging to a Vanishing Point

Lens fogging is the welder's greatest complaint. It reduces production because of a continuous work stoppage to wipe the fog from the lenses.

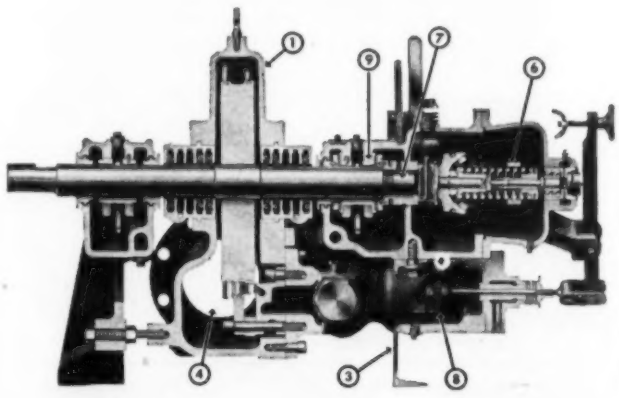
The Sellstrom No. 420 Welding Goggles have a patented ventillating feature which reduces fogging to a vanishing point. Here are a few of the special features: (1) Each eye cup has six ½ inch ventilating ducts with an extra duct on each side—a total of eight ventilating ducts for each eye cup—sixteen for each pair of goggles. No other goggle can equal this abundant air circulation. (2) The air ducts are so arranged that it is impossible for a single speck of light to penetrate through the air ducts. (3) The frame is moulded from tough plastic, with all edges carefully rounded for maximum comfort. (4) The special inner lens retaining rings are so firm that even a cracked lens remains in place. (5) A covered stainless steel nose bridge chain (50# strength) permits adjusting to 1/1000 inch for perfect fit. (6) Single adjustment one-piece headband. (7) Extremely light weight. Including lenses 3½ ounces. Each pair in an individual carton. Sold by most dealers. Write for special folder with complete description of these outstanding welding goggles which reduce fogging to a vanishing point. Manufactured by **Sellstrom Manufacturing Company,** 654 North Aberdeen Street, Chicago 22, Illinois. Advt.

For more details circle NED-851 K3 on enclosed inquiry slip

NEW DE LAVAL HCB
SINGLE STAGE TURBINE

can be ordered from stock

Here's the new De Laval HCB Single Stage Turbine which is now "on the shelf" . . . ready for immediate shipment. It can handle—at low cost—a variety of applications in your plant.



1. **Case and Cover Split Horizontally** on centerline for ease of maintenance
2. **True Centerline Casing Support** assures distortion-free radial expansion. *Not shown.*
3. **Flexible Support** at governor end provides for axial expansion.
4. **Exhaust Opening** either right or left side for installation flexibility.
5. **Steam Strainer,** protecting trip and governor valves, is *removable* for cleaning without breaking steam connections. *Not shown.*
6. **Constant Speed Governor** features governor weights pivoted around frictionless surfaces.
7. **Complete Governor Assembly** is now *replaceable as a unit.*
8. **Balanced Single Seated Main Governor Valve** has proportional flow characteristics for sensitive, positive control.
9. **Shaft Locating Bearing** of adjustable double collar type.

Horsepower: 100 MAX • Steam Pressure: 300 PSIG MAX • Steam Temperature: 550F MAX • Exhaust Pressure: 25 PSIG MAX • Speed: 4,000 RPM MAX • Steam Inlet: 2" — 250# ASA FLG. • Exhaust: 6" — 150# ASA FLG. • Weight: 1,200 LB

Send for new Bulletin 4206

DE LAVAL

Mechanical Drive Turbines

DE LAVAL STEAM TURBINE COMPANY
DL 205C *808 Nottingham Way, Trenton 2, New Jersey*

For more details circle NED-852 K3 on enclosed inquiry slip

WISSCO STEEL PROCESSING BELT

Turn your products out faster, more economically in continuous straight-line production with a Wissco Belt. To order, write or call our nearest sales office.

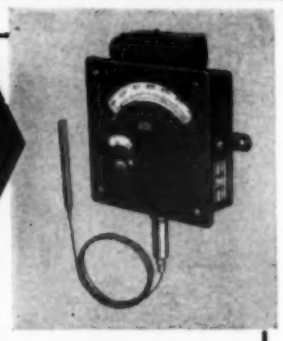
THE COLORADO FUEL AND IRON CORPORATION—Denver, Colorado
PACIFIC COAST DIVISION—Oakland, California
WICKWIRE SPENCER STEEL DIVISION—Atlanta • Boston • Buffalo
Chicago • Detroit • New Orleans • New York • Philadelphia

1431

WISSCO BELTS
PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION CF&I

For more details circle NED-853 K3 on enclosed inquiry slip

A WIDE RANGE INDICATING CONTROL



TYPE E8N

The type E8N indicating control is ideal for installations where an exact temperature reading must be readily available at all times. It is a broad range, precision-built unit that shows the exact temperature of the thermal bulb at all times. The E8N is compensated accurately for wide ambient temperature changes, is simple in design and contains no delicate mechanisms. Various models are available covering ranges of 300° F to 600° F between limits of -150° F to 600° F. On-off differentials available as low as .25° F. Complete details and electrical specifications are contained in bulletin #4-1, write for it today.

UNITED ELECTRIC CONTROLS COMPANY
81 School Street, Watertown, Mass.

STANDARD & SPECIAL THERMOSTATS & PRESSURE SWITCHES

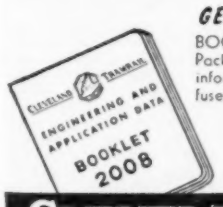
For more details circle NED-854 K3 on enclosed inquiry slip

GANTRY CRANES SAVE TIME

Cost Fraction of Heavy Overhead Crane

If your overhead crane is loaded with work, consider the addition of single-leg gantry cranes to work under it. You can free it of much of the lighter work and eliminate costly waiting time of skilled workers. Several gantries can be purchased for the price of a single heavy overhead traveling crane. Supplied for hand or electric operation.

GET THIS BOOK!
BOOKLET No. 2008
Packed with valuable information . . . Profusely illustrated.



CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6622 East 285th St., Wickliffe, O.

CLEVELAND TRAMRAIL

For more details circle NED-855 K3 on enclosed inquiry slip

SHORING DEVICE
features rapid adjustment

Rapid adjustment by virtue of a collar with four lateral grooves graduated in 1-in. levels is a feature of this all steel-shoring device. It can be set not more than 1 in. away from the desired height and less than four turns of the screw handle are needed to fit it snugly in place. Speedset adjusting collar is designed for use with shoring in 6 to 11-ft, 8 to 13-ft and 10½ to 15½-ft sizes. Flat plate, 8 and 14-in. J-heads are available for different applications. Nailing plates (not shown) are welded to the shoring for bracing in either direction. Made by **Waco Mfg. Co.**, Dept. KP, 3565 Wooddale Ave., Minneapolis 16, Minn.

For more details circle NED-856 K3 on enclosed inquiry slip

AIR COMPRESSOR
6½-lb unit has 2500 psi discharge

Model 32R1500 air compressor weighs only 6½ lb, but has a rated discharge pressure of 2500 psi. It is usable for such applications as charging industrial breathing equipment for personnel during temporary exposure to noxious or poisonous fumes. Three-stage compressor is V-belt driven by any power source of ½-hp or greater. It will compress 70 cu ft of free air to 2350 psi in 100 minutes at 5000 rpm. Ambient temperature range is 0 to 160° F. Overall dimensions of the air cooled unit, which has a relief valve and 0 to 3000 psi pressure gage, are 10½ x 13 x 7 in. Mounting base, air hose and combination filter and moisture separator are available. Made by **Cornelius Co.**, Dept. KP, 551 39th Ave. N.E., Minneapolis 21, Minn.

For more details circle NED-857 K3 on enclosed inquiry slip

DO YOU KNOW? Protective ceramic coatings for many types of metals used in military, industrial and civilian applications retard metal oxidation, reflect or suppress radiant energy and act as high temperature insulations. Service in this field being offered includes consultation, samples and prototypes. For information write General Ceramics & Steatite Corp., Chemical Equipment Div., Dept. A, Keasbey, N. J.

For more details circle NED-858 K3 on enclosed inquiry slip

Fielden tektor

ELECTRONIC LEVEL CONTROL

- *Simple, Fail-Safe, Hi or Lo Level Control*
- *Available in Class I-D, Class II-F & G Construction*
- *No Moving Parts, Only One Radio Tube*
- *Accurate Level Control as Close as 1/16"*
- *Low First Cost, Low Operating Cost*

The Fielden TEKTOR provides constant, accurate level indication or control of any material—liquid, divided solid or interface, conducting or non-conducting, wet or dry. Offers a low cost solution to practically every problem of fixed level control or limit alarm without need for special apparatus. Operates visual or audible alarms, motor starters, solenoid valves, timers and other equipment simply, accurately by means of a highly stable capacitance operated relay circuit. Does not depend on electrical conductivity. Ideal for remote control or warning. Provides all the accuracy needed at a sensible price. Thousands now in use. Write for detailed information to Dept. F.

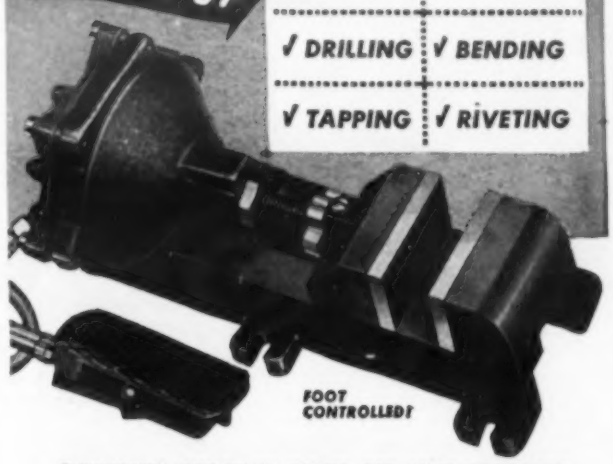
Fielden
INSTRUMENT DIVISION
ROBERTSHAW-FULTON CONTROLS COMPANY
2920 N. 4th St., Philadelphia 33, Pa.

Dollar for Dollar—Your Best Instrument Value

For more details circle NED-859 K3 on enclosed inquiry slip

SPEEDY AIR VISE

SPEEDS UP
✓ MILLING ✓ PUNCHING
✓ DRILLING ✓ BENDING
✓ TAPPING ✓ RIVETING



GRIPPING FORCE 15 TIMES AIR LINE PRESSURE

Speedy Air Vise helps you do dozens of operations faster, better, cheaper—by air pressure! Foot control valve opens and shuts vise instantly, leaving *both* hands free to produce *more!* Jaw opens up to 3 inches, holds castings, parts, jigs, etc. Compact and trouble-free.

Complete with Foot Control, Air Hose and Fittings.....only **$36.00**

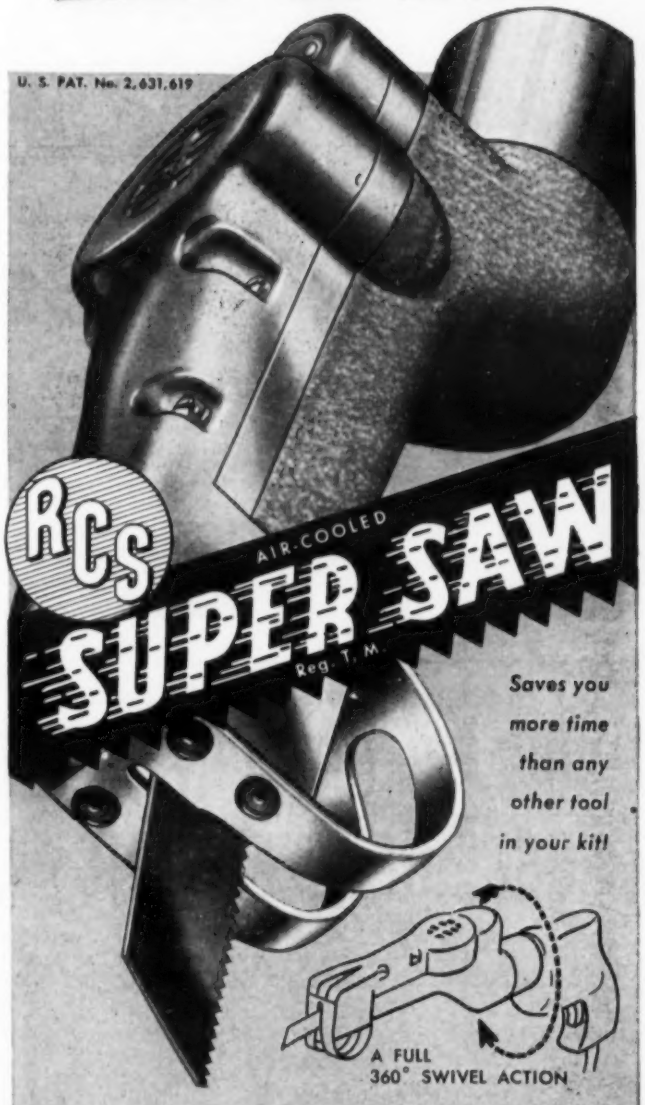
Prompt Delivery from Your Supplier or Write Direct

W. R. BROWN CORPORATION • 2047 N. Normandy Ave. • Chicago 35, Ill.

AIR REGULATORS • AIR FILTERS • AIR GUNS • PORTABLE COMPRESSORS

For more details circle NED-860 K3 on enclosed inquiry slip

OVER 40,000 NOW IN USE!



A "lifetime" tool with built-in blower, ball and roller bearings, sealed lubrication, etc. Safe—(two-handed operation required). 360° swivel action for maximum versatility. Blades to cut everything including stainless steel. Fits your present ¼" heavy-duty drill.

RCS TOOL SALES CORPORATION
JOLIET, ILLINOIS

Gentlemen:
Please send us Bulletin R10 and the name of the nearest Super-Saw distributor.

Name_____
Address_____
City_____ Zone_____ State_____

For more details circle NED-861 K3 on enclosed inquiry slip

KNEE SAFETY!

..IN YOUR PLANT

JUDSEN KNEE PADS

for every down-on-the-knees job!

Alert Safety Directors and Plant Executives throughout the country have been quick to recognize the benefits offered by JUDSEN "*Cushion Soft*" KNEE PADS:

- Increased Work Efficiency!
- Less Fatigue! Less Time-Out!
- Protection Against Injuries!

Neat, durable, compact JUDSEN KNEE PADS are as easy to wear as gloves . . . *kneeling* . . . *standing* . . . *walking*. Find out about this AID TO PRODUCTION EFFICIENCY today. ASK YOUR SUPPLIER OR WRITE.

JUDSEN RUBBER WORKS, INC.
4107 WEST KINZIE STREET, CHICAGO 24
Manufacturers MOLDED • EXTRUDED • SPONGE Since 1891

▲ For more details circle **NED-862 K3** on enclosed inquiry slip ▲

CLEARING ANNOUNCES

...a new line of single and double crank straight side presses

CAPACITIES — 100 — 250 TONS

200 ton Clearing Single Crank Press

Here are the construction features you've always wanted in presses that give you economy right from the start—maintain it in years of profitable operations.

Write for free bulletins on Single and Double Crank Straight Side Presses

CLEARING MACHINE CORPORATION
6494 WEST 65TH STREET • CHICAGO 38, ILLINOIS
HAMILTON DIVISION, HAMILTON, OHIO

▲ For more details circle **NED-863 K3** on enclosed inquiry slip ▲

Let the Houghton Man show you

HOW TO GET GREATER FUEL OIL EFFICIENCY

Send this coupon

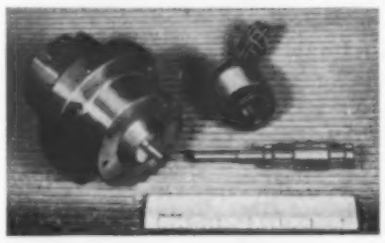
E. F. HOUGHTON & CO.
303 W. Lehigh Ave., Philadelphia 33, Pa.

We want to know how "Houghto-Solv" can help make our fuel dollars worth more by increasing the efficiency of the fuel oil we are using.

Name _____
Company _____
Address _____
City _____ Zone _____ State _____

▲ For more details circle **NED-864 K3** on enclosed inquiry slip ▲

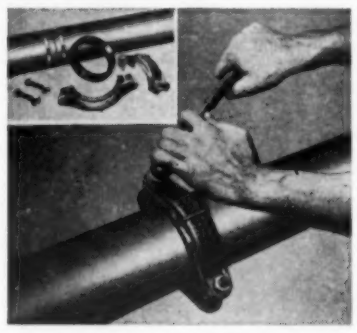
HIGH FREQUENCY MOTORS
stator cooled by water jacket



High frequency motors for experimental and production applications have speeds up to and beyond 100,000 rpm. Simple, compact units have rotor mounted directly on the spindle, it being the only moving part of the driving motor. Stator, carrying the motor windings, is cooled by a water jacket. Lubrication is by oil mist carried in a stream of air. Motor is totally enclosed. Normally, preloaded ball bearings are incorporated, but for certain light load applications in the higher speed ranges special air bearings where the spindle rotates on a cushion of compressed air are used. A converter or an alternator must be used as a source of high frequency current. Made by **Bryant Chucking Grinder Co.**, Dept. NE, Springfield, Vt.

▲ For more details circle **NED-865 K3** on enclosed inquiry slip ▲

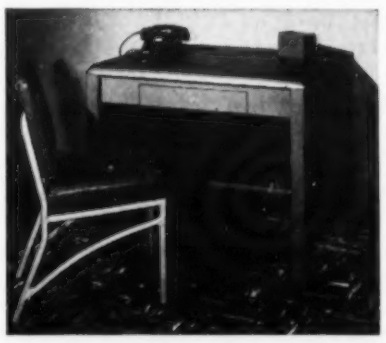
LIGHTWEIGHT COUPLING
for grooved pipe systems



A lightweight coupling for grooved pipe systems, Gruvajoint is available in 2, 3, and 4-in. pipe sizes for line pressures up to 500 psi. Couplings are finished with a green rust inhibitor, and have sealing gaskets of resilient synthetic rubber designed to resist oil and chemicals. They are leakproof under end pulls of up to 7500 lb, permit misalignment up to three degrees and withstand temperatures between −65° and 200° F. Removal and application of the joints takes approximately 1 minute, and they can be used over and over again. Made by **Gustin-Bacon Mfg. Co.**, Dept. H, 210 W. Tenth St., Kansas City, Mo.

▲ For more details circle **NED-866 K3** on enclosed inquiry slip ▲

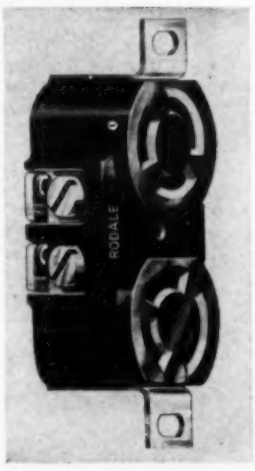
STEEL DESK & BOOKCASE
with molded or square-edged tops



Streamline steel office furniture is being augmented with a solid end bookcase and a 36-in. wide salesman's desk, both offered with molded or square-edged tops and in choice of gray, green, grained walnut and grained mahogany. Bookcase has two shelves that are adjustable on 1-in. centers. They are made without door or with two sliding glass doors. Glass can be plain or fluted. Desk is 36 x 24 in., has a center drawer and 10-in. deep shelf. Made by **Globe-Wernicke Co.**, Dept. T, 5028 Carthage Ave., Cincinnati 12, O.

▲ For more details circle **NED-867 K3** on enclosed inquiry slip ▲

DUPLEX RECEPTACLE
three-wire grounding type



Accommodating standard parallel or polarized parallel caps, No. 572 three-wire duplex receptacle of the grounding type is adaptable for back or side wiring. Rated 15 amp 125 v, it features a break-off point on terminals for two-circuit installations. Receptacle will also accommodate grounding type U-blade plugs and two armored or rubber caps. Grounding wire is installed on a hexagonal green screw. Unit fits standard duplex plates. Made by **Rodale Mfg. Co.**, Minor St., Emmaus, Pa.

▲ For more details circle **NED-868 K3** on enclosed inquiry slip ▲

Take an EXTRA Profit *with* **Weld-Bilt** *Experience in* Materials Handling!

One Midwest manufacturer saved $90,000 on equipment cost alone because he called in a Weld-Bilt engineer FIRST, before deciding on expensive special-design units recommended to solve a difficult handling problem. Our engineer, experienced in cost-saving shortcuts, showed how simple adaptation of more standard equipment could do the job even better.

This is the kind of service you can expect from WELD-BILT . . . a thorough analysis of your problems based on years of varied experience and wide knowledge, of handling problems . . . then a recommended solution that will do YOU the most good — in time and labor savings, in product protection, production speed-up — at the lowest cost. It may involve adapting standard equipment, custom-engineering new equipment — or merely realigning your present operations.

Call in the WELD-BILT Materials Handling Engineer for an economical solution to your problem today. You'll probably save money.

WEST BEND EQUIPMENT CORP.
311 Water St., West Bend, Wis.

MATERIALS HANDLING ENGINEERS

Portable Elevators • Pallet Trucks • Single Stroke Lift Trucks • Two-Wheel Trucks • Platform Trucks • Skid Platforms.

▲ For more details circle **NED-869 K3** on enclosed inquiry slip ▲

MATCH

the quality of your product with

Grammes

METAL NAME PLATES

Grammes metal craftsmen will make your name plate stand out and make it "sell" as well as *tell*. They are experienced in giving you just what you want: Readability that endures in metal. A sketch or blueprint—or just a hint—is all we need to show you what we can do with a name plate for you. Send for our "Tips on Name Plate Selection and Design". Write to:

METAL STAMPINGS · NAME PLATES DIALS · **L.F. GRAMMES & SONS** INCORPORATED ALLENTOWN, PA. · ADVERTISING SPECIALTIES · TRIMS • BEZELS PANELS

SPECIALISTS IN DECORATIVE METAL

▲ For more details circle **NED-870 K3** on enclosed inquiry slip ▲

SHELDON

CHICAGO U. S. A.

OFTEN PAYS OUT ON THE FIRST JOB...

and gives additional years of "cost free" service.

In the past, lathes were generally bought as large and as heavy as possible to insure accuracy and sufficient power. Now, with accurate, low-cost Sheldon Precision lathes, it is more profitable to buy these faster, cost-cutting lathes for the specific job at hand just as you would buy jigs and fixtures.

In savings of tooling costs, operator cost, power cost, and plant loading, as well as extra profits from more pieces per hour, Sheldon lathes often pay back their cost on a single run.

Sheldon lathes will work to the closest tolerances—have "Zero Precision" Taper Roller Bearings. They can take a healthy cut when operating at high speed direct drive—have double V-belts to the spindle. They will swing 10", 11" or 13" and have a 1⅜" hole through the spindle—have sufficient capacity for the great bulk of lathe work. Sheldon lathes have created a new factor for figuring machinery costs. They are tools you should know about.

Write for Catalog

SHELDON MACHINE CO., INC.
4215 N. Knox Ave. Chicago 41, Illinois

▲ For more details circle **NED-871 K3** on enclosed inquiry slip ▲

PLAY SAFE ON STAIRWAYS with BIL-JAX MAINTENANCE TRESTLE

It's easy to bridge stairways, terraces, curbings and other obstacles with Bil-Jax maintenance trestle. Work platform is always level . . .always safe!

Ball-bearing casters (locking type) make it easy to maneuver. Patented. U. L. Approved. Distributors in principal cities. Write for catalog. Address Dept. Z-10

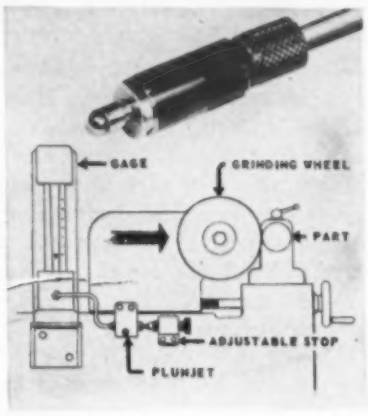
OTHER BIL-JAX EQUIPMENT
Steel Scaffolds, Swing Scaffolds, Putlogs Ladders, Hoisting Towers for sale or rent.

West Coast: 216 W. Los Feliz Rd., Glendale, Calif.
Export Office: 80 Broad St., New York 4, N. Y.

GETS YOU UP IN THE WORLD
BIL-JAX INC. Archbold, Ohio

For more details circle NED-872 K3 on enclosed inquiry slip

AIR GAGE CARTRIDGE used without stopping machine to measure metal removal accurately



Accurate means of gaging the removal of metal to the last few ten-thousandths of an inch without stopping the machine or removing the part is provided by a Plunjet gaging cartridge connected to columnar air gage of the Precisionaire type. Cartridge is mounted on the infeed slide so that it indicates against fixed adjustable stop attached to stationary part of the machine. As a result, any movement of infeed slide is transmitted to gage where it is amplified and indicated by float position in the gage.

In a gage with 5000 to 1 amplification, movement of 0.0001-in. in the infeed slide causes float to move ½-in. Plunjet and position of float are set with a part that is within tolerance. Each successive part is machined until float is in line with preset pointer on gage. Made by **Sheffield Corp.,** 721 Springfield St., Dayton 1, O.

For more details circle NED-875 K3 on enclosed inquiry slip

FOR LOW-COST REVERSIBLE ROTARY MOTION

Specify HYDRECO FLUID MOTORS

HYDRECO Four-Bolt, Gear-Type Hydraulic Motors provide economical and reliable rotary motion in either direction.

Performance Data—HYDRECO Fluid Motors

Motor Series	Horsepower at 2000 rpm, 1000 psi	GPM required at 2000 rpm	Torque Output (in pounds-inches) at 1000 rpm, 1000 psi
1500	3 to 8	7 to 16	98 to 253
2000	8 to 17	19 to 38	275 to 575
3000	15 to 52	34 to 120	520 to 1770

Write for complete information on HYDRECO Fluid Motors, Gear Pumps, Control Valves, Auxiliary Valves and Cylinder Assemblies.

HYDRECO DIVISION
THE NEW YORK AIR BRAKE COMPANY
1108 EAST 222 STREET • CLEVELAND 17 • OHIO

For more details circle NED-878 K3 on enclosed inquiry slip

NEW! Porter-Cable ½" DRILL with 7 Grip Positions

HERE'S a new standard duty ½" drill you can really "bear down on." Its 2-position auxiliary handle permits extra leverage on the tough jobs. Its exclusive rear handle adjusts horizontally or vertically so you can lean into the work... you can even remove the rear handle—or both handles—and concentrate your whole strength behind the drill body.

Features: heavy, precision-ground Jacobs gear-type chuck . . . double compound reduction gears . . . combination ball radial and thrust bearings. U.L. listed.

At Your Porter-Cable dealer's $48.95
(New ¼" Drill $29.95)

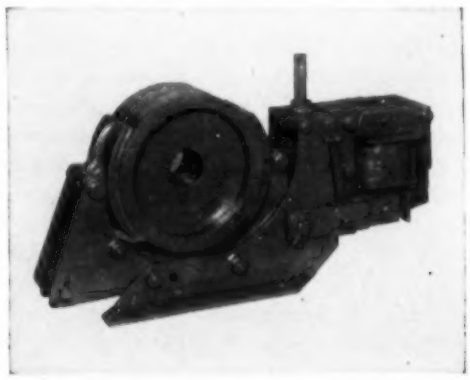
Porter-Cable Machine Co.
1410 N. Salina St., Syracuse 8, N. Y.
(In Canada: Strongridge, Ltd., London, Ont.)

Porter-Cable
Quality Electric Tools

For more details circle NED-873 K3 on enclosed inquiry slip

ALTERNATING CURRENT BRAKE for start-stop motor installations

Single-adjustment type AK alternating current brake combines spring compression to control torque, magnet travel to control total shoe clearance from wheel



and auxiliary screw adjustment to equalize shoe clearances. A visible indicator has also been provided to show when and how much to readjust for brake wear. Brake is applicable to most alternating current motor installations that demand start-stop operation or quick deceleration. It will operate satisfactorily regardless of the angle of mounting plane. Made by **Westinghouse Electric Corp.,** P. O. Box 2099, Pittsburgh 30, Pa.

For more details circle NED-876 K3 on enclosed inquiry slip

WHEN YOU NEED NEW TIRES FOR YOUR LIFT TRUCKS

Call your truck distributor

● When you entrust your lift truck repairs to your truck distributor, you know the finished repair job will be complete and satisfactory. But, how about new tires? Your truck distributor can re-equip your trucks with tires, too! He knows what's best for your trucks . . . that's why he stocks **Monarch Mono-Cushions.** Place all your truck service under one roof . . . let your truck distributor service them from seat . . . to **Monarch Mono-Cushion** tires . . . the tires that keep your trucks steady.

THE MONARCH RUBBER COMPANY
501 LINCOLN PARK
HARTVILLE, OHIO

For more details circle NED-879 K3 on enclosed inquiry slip

FAST MOVING LINE TO MORE PROFITS VIA "STREAMLINER" CONVEYORS

Yes . . . on the move to faster handling of goods, at a reduction in handling costs! If you've never visualized a "Streamliner" engineered conveyor in your plant, just take a moment to determine where you could use one. Shipping? Receiving? Production? Storage? No matter where, "Streamliner" Conveyors will save you time, money and man-effort. Get complete facts today by requesting Bulletin 302.

Ferguson designs and manufactures a variety of conveyors and conveyor systems to meet individual requirements.

HARRY J. FERGUSON COMPANY
133 WEST AVENUE, JENKINTOWN, PENNA.

For more details circle NED-874 K3 on enclosed inquiry slip

STORE! DISPENSE! CONTROL! 54 DIFFERENT TYPE ITEMS

with Equipto Small Parts Cabinets

You'll be amazed at the simplicity of handling small parts with this all-steel, 18 drawer Model 11 Equipto Cabinet! It measures only 34" x 13¾" x 12". May be used individually, in stacks, under counters, or in shelving.

Cabinet has heavy gauge frame welded into solid, one-piece assembly. Sturdy drawers (11" x 5⅝" x 3⅛") slide freely without swaying or sticking. Every drawer is separated into 3 compartments by adjustable dividers. This provides 54 compartments per cabinet. No slots in side of drawers—parts never catch or jam.

Dividers are slanted at top to keep label in full view . . . simplify removal of parts. Finish is olive green baked enamel.

Ideal for storage of nuts, bolts, screws, washers, bushings, packings, adaptors, springs, stems, small gears, etc.

Equipto

See Your Equipto Distributor or Write for Free Catalog

Division of Aurora Equipment Company
690 Prairie Avenue, Aurora, Illinois
Steel Shelving...Parts Bins...Drawer Units

For more details circle NED-877 K3 on enclosed inquiry slip

"SHADE"

Remarkable Vinylite Sheeting that ABSORBS Heat and Glare

SHADE will never become brittle or crack even in temperatures from —25 to 150 F. All you need is a squeegee, a bucket of water, and some pieces of factory pre-cut SHADE to eliminate glare and heat. Easy to apply, permanent and washable, SHADE is custom cut to fit your windows—Order yours today!

The unfiltered rays of the sun, even on a cloudy day, can be a major cause of fatigue. SHADE is a specially formulated compound to filter light!

NO MORE PAINTING
No need for repeated painting of glass surfaces: with SHADE you have an easily applied filter, bonded to the glass. It won't crack or grow brittle.

EASY TO APPLY
Application requires no special skill or tools. It is pre-cut at the factory. Wet, place polished side to glass, squeegee out excess water.

PERMANENT
Following out this procedure will effect a permanent bond. SHADE will never come off until you pry up a corner and strip it off yourself.

WASHABLE
Can be washed like regular glass. If you wish to remove it, a quick washing in warm water will restore its adhesiveness.

COLOR CHOICES
Colors are available in FROSTED TRANSLUCENT, ARCHITECTURAL BLUE, FILTERED WHITE, OLIVE GREEN, TRANSLUCENT GREEN and BLACK-OUT BLACK.

TRANSEAL, Ltd.
Dept. NED, 821 North Ave., Plainfield, N. J.

For more details circle NED-880 K3 on enclosed inquiry slip

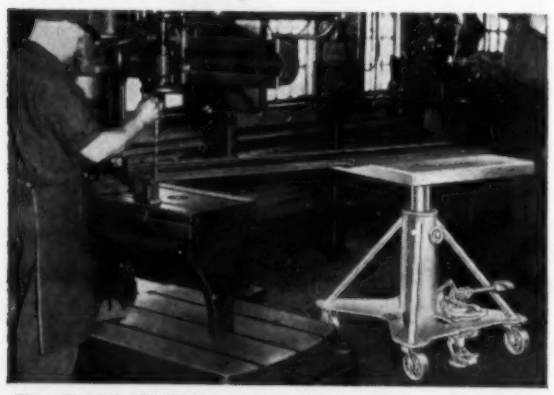
He "Positions" his work

. . . you can too, with

RAYMOND

PORTABLE ELEVATING TABLE

Take a tip from your barber and elevate your work to the most convenient working level! Get a RAYMOND Portable Elevating Table . . . you'll use it for die handling, sheet feeding, work positioning, loading and unloading.



The RAYMOND Elevating Table employs hydraulic power to do all your lifting and lowering. Sturdy 30" square top can be rotated when desired—convenient foot pump frees operator's hands. Smooth-rolling casters make table highly portable. Floor lock holds it securely in place. Standard Model elevates from 28" to 44"—Telescopic Model from 28" to 50". Both have 2,000 lb. capacity.

GET THIS BULLETIN Mail coupon today . . . and we'll send you Bulletin 232, describing RAYMOND Portable Elevating Tables in detail!

The RAYMOND CORPORATION
4109 Madison Street, Greene, N.Y.

Please send me Bulletin 232 on your Portable Elevating Table.

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ STATE _____

For more details circle NED-881 K3 on enclosed inquiry slip

New Literature and Catalogs

Centrifugal Blowers & Exhausters

Lamson Corp., Billmyre Blower Div.—32-page illustrated bulletin B-6 describes centrifugal blowers and exhausters for air or gas handling. It gives complete specifications of each unit, including performance, engineering data and design considerations. Units are available with either cast iron or fabricated steel housings. Available air blower and exhauster pressures range between ½ and 7 psi, while gas blowers are for pressures from ½ to 6 psi, with specific gravities from 0.55 to 1.40.

For more details circle NED-882 K3 on enclosed inquiry slip

High Pressure Tube Fittings

Flodar Corp.—28-page illustrated general catalog No. 53 covers line of Flodar high pressure tube and pipe fittings. Featured are "Prize Pair" tube fittings which seal pressures sufficient to burst the tube. Facts regarding selection of proper tubing, bending and instructions for making perfect joints are included. Both flare and nonflare types of joint principles are used.

For more details circle NED-883 K3 on enclosed inquiry slip

Fan Engineering

Aerovent Fan Co.—Engineering, installation and operating data for all standard and special duty fan applications is in 64-page fan manual No. 20. Details for calculating duct sizes, friction losses, fan performance and horsepower requirements are given and all Aerovent fans and accessory equipment are described.

For more details circle NED-884 K3 on enclosed inquiry slip

Portable Electric Tools

Thor Power Tool Co.—Illustrations, descriptions, specifications and prices of all Thor universal electric tools, including drills, grinders, hammers, saws, screwdrivers, nut setters, sanders, polishers, tappers, nibblers, balancers, impact wrenches and automotive power tools are found in 40-page catalog No. 39-A.

For more details circle NED-885 K3 on enclosed inquiry slip

Roller Chains & Sprockets

Diamond Co.—16-page illustrated catalog 753 describes in detail and illustrates stock models of roller chains of various pitch sizes, finished bore sprockets with keyways and setscrews in over 75 tooth sizes with taper-lock bushings. Speed ratios and other technical data are included.

For more details circle NED-886 K3 on enclosed inquiry slip

Packaged Water Conditioner

Permutit Co.—A self-contained packaged water conditioning plant that will chlorinate, coagulate, clarify, filter, neutralize, dealkalize and soften raw water supplies is graphically described and illustrated in 8-page bulletin 3869. Operation principles, ratings, capacities and sizes are covered.

For more details circle NED-887 K3 on enclosed inquiry slip

Files & Tools

Heller Brothers Co.—Complete line of Swiss Pattern, Nucut American Pattern, Vixen milled curved tooth, American-Swiss Swiss Pattern, American-Swiss American Pattern files and Heller tools are described and illustrated in series of catalogs.

For more details circle NED-888 K3 on enclosed inquiry slip

Arc Welding Machines

Air Reduction Sales Co.—Over 20 different models of arc welding machines are described and illustrated in 44-page catalog 1340. Alternating, and direct current and inert-gas models are covered. All have their specifications, features and electrical data given. Sections are devoted to accessories and electrodes required to perform a specific job.

For more details circle NED-889 K3 on enclosed inquiry slip

Edge Position Control

Askania Regulator Co.—Every web guiding job is a potential application for the edge position control described in illustrated 12-page bulletin 161. Various models and applications in paper, plastics, textile, rubber, foil and metal processing fields are detailed. Nothing but a breath of air touches the controlled web edge, according to the bulletin.

For more details circle NED-890 K3 on enclosed inquiry slip

SHOP TOOL for measuring surface roughness . . . *Since 1936*

The PROFILOMETER

- ★ Used in thousands of production and inspection departments—wherever most convenient—even on parts still in the machine.
- ★ No special skill or experience required.
- ★ Measures practically ALL surfaces that can be produced by machining, grinding and finishing operations.
- ★ Dependable—and tamper-proof.
- ★ Sold and serviced by *specialists* in surface measurement—since 1936.

FREE BULLETIN LT77
describes the Profilometer's practical operating features—shows 7 ways in which YOU may gain through surface roughness measurement. WRITE TODAY for your copy.

Profilometer is a registered trade name.

MICROMETRICAL MANUFACTURING COMPANY
345 S. MAIN ST. ANN ARBOR 9, MICHIGAN

For more details circle NED-891 K3 on enclosed inquiry slip

SOLVE EXTREME PRESSURE LUBRICATION PROBLEMS

The new miracle molybdenum disulfide lubricant.

Anti-Seize is a stable non-melting, multi-purpose molybdenum disulfide lubricant having a phenomenal capacity to prevent seizing and galling at bearing pressures well over 100,000 pounds per square inch. Anti-Seize will lubricate at temperatures below sub-zero and up to 750 degrees F.

Write today DEPT. NED. for new literature and get the complete story.

MANUFACTURERS OF SPECIAL LUBRICANTS
BEL-RAY CO., INC.
MADISON, NEW JERSEY

For more details circle NED-892 K3 on enclosed inquiry slip

LET AMPCO PROVE ITS ~~METAL~~ mettle

Announcing a new service from Ampco

AMPCO* METAL Grade 24 Die Blanks

Now available from stock

. . . the dies for forming and drawing stainless steels that give you longer runs, reduce scrap loss, cut your costs.

Now you get immediate delivery from Milwaukee stock and new low prices on most commonly used types and sizes of Ampco Grade 24 die blanks including:

34 sizes of solid rectangular pieces from ½" x 1" x 12½" to a maximum of 4" x 4" x 12½".

27 sizes of centrifugally cast blanks from 4" OD x 1" ID x 1½" thick up to 20" OD x 12½" ID x 2" thick.

11 sizes of solid rounds up to 5" OD x 12½" long.

Here's what you get with die blanks made from this remarkable alloy:

1. **Usual scrap losses are minimized,** because Ampco Grade 24 dies are non-galling, non-loading.
2. **You save finishing time and costs — get a surface free from scratches and die marks.**
3. **You get longer runs without re-dressings, longer die life, reduced downtime.**

Write today for complete information and new prices.

Ampco Metal, Inc.
DEPT. NE-10 • MILWAUKEE 46, WISCONSIN
West Coast Plant, Burbank, California D-10

*Reg. U. S. Pat. Off.

For more details circle NED-893 K3 on enclosed inquiry slip

IMPROVED MODEL McCORD UNIT HEATER

The improved McCord Unit Heater incorporates every unit heater advancement that McCord engineers and the experience of thousands of users could suggest. The distinctive modern design with rounded corners combines improved appearance with greater strength and houses a heating unit that sets a new standard of heat transfer efficiency and quietness. The scientific design of the individual turbo spiral fin tube core provides even distribution of heated air at high velocity. The individual tubes prevent stresses due to unequal expansion. The entire heating unit is spring suspended and floats free in the casing eliminating rigid connections. Deep pitched fans provide high air delivery and quietness of operation.

This improved heater is a development of the experience gained from the thousands of McCord Unit Heaters in service. It combines good appearance with that inherent McCord quality of ruggedness and dependability that has made McCord the standard among many of the largest industrial users. You may also replace old leaking heaters using new McCord units and your old fan and motor. Write for new catalogs—Unit heaters and blast coil units. **McCord Corporation,** 2580 E. Grand Blvd., Detroit, Mich. —Advt.

For more details circle **NED-894 K3** on enclosed inquiry slip

A BETTER WAY TO MASS PRODUCE INTRICATE PARTS and COMPONENTS

The Microcast Process of precision investment casting offers exceptional opportunities in the mass production of parts and components. Product improvements through a wider choice of metals, substantial savings in cost, and greater freedom of part design are only a few of its advantages.

Investigate the MICROCAST Process today. Find out how it can help produce a better, more economical product for you.

MICROCAST PRECISION CASTINGS PROCESS

microcast®

MICROCAST DIVISION • Austenal Laboratories, Inc.
7001 South Chicago Avenue, Chicago 37, Illinois
224 East 39th Street, New York 16, New York

For more details circle **NED-895 K3** on enclosed inquiry slip

At last...

a Quick-Detachable Connection that isn't a bottleneck!

Binks new Q-D Connection for spray guns and other air-operated equipment slashes pressure drop to only 5%!

The improvement it offers is quickly seen from laboratory tests of *other* standard connectors whose pressure drops ranged from 21⅓ to 57⅓%! Besides low-pressure drop, Binks new Q-D Connection offers 4 other major improvements. Send for details, today!

Send for Bulletin Q-D

Tells how Binks Q-D Connection speeds work, cuts fatigue, ends danger of thread damage. Prices included. No obligation. Write: Binks Manufacturing Co., 3122-34 W. Carroll Ave., Chicago 12, Ill.

Binks EVERYTHING FOR SPRAY PAINTING

GUNS • SPRAY BOOTHS • MATERIAL TANKS • EXTRACTORS & ACCESSORIES

REPRESENTATIVES IN PRINCIPAL U. S. & CANADIAN CITIES • SEE YOUR CLASSIFIED DIRECTORY

For more details circle **NED-836 K3** on enclosed inquiry slip

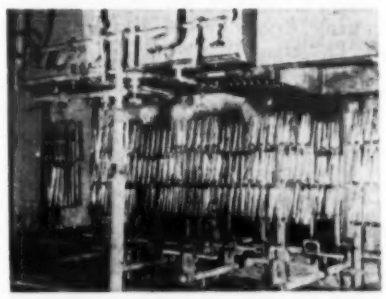
New Processes and Materials

RELEASE COATING makes label separation easier

Applying the larger sizes of Brady markers is now "child's play" through the use of Blue Streak release coating applied to the marker dispenser cards during fabrication. This coating covers the same area as the marker on the card, and reduces the physical effort needed to separate the two. It has no effect on the adhesive properties of the marker after it has been separated, but reduces application time and eliminates distortion of the lettering due to stretching while the marker is being pulled from its card. It will be used with many of the markers, safety signs and similar industrial products made by **W. H. Brady Co.,** Dept. 251, 727 W. Glendale Ave., Milwaukee 12, Wis.

For more details circle **NED-897 K3** on enclosed inquiry slip

BRIGHT NICKEL PLATING process is easily controlled and produces well-leveled surface



Nickel-Lume organic type bright nickel coating process is inexpensive to operate and easy to control and requires equipment suitable for a Watts nickel bath. Ordinary auxiliary equipment can be used. Filtration can be periodic or continuous, ventilation is not required, and heat requirements are comparatively low.

Characteristics of the process deposits are: bright white color approaching the whiteness of cobalt-nickel deposits; well-leveled surfaces; low internal stress; good ductility; and highly active surface which accepts chromium without any activating treatment. Baths can be operated from room temperatures up to or beyond 140° F with full deposit brightness. Current densities can be varied from 5 to 70 amp per square foot. Developed by **Hanson-Van Winkle-Munning Co.,** W. Church St., Matawan, N. J.

For more details circle **NED-898 K3** on enclosed inquiry slip

FORT WORTH INDUSTRIAL EXHAUST FANS

FOR PNEUMATIC CONVEYING AND DUST COLLECTING SYSTEMS

THE HEART of AIR HANDLING IS THE FAN

FORT WORTH

S-2 EXHAUST FAN has many features that assure satisfactory operation

- ★ Direction of discharge easily changed
- ★ Direction of rotation easily changed
- ★ Housing, blastwheel, and bearing stand are ruggedly constructed for vibration free operation
- ★ Designed for efficient operation
- ★ Exclusive Paddle-type construction enables blastwheel to handle long stringy material through fan.
- ★ Bearings: two anti-friction, self-aligning pillow blocks

Write for catalog 500, which gives performance data and dimensions of Fort Worth Exhaust Fans.

FORT WORTH STEEL AND MACHINERY CO
Dept. 2210, 3400 McCart, Fort Worth, Texas

FORT WORTH WAREHOUSES:
• CHICAGO • ST. LOUIS • KANSAS CITY
• MEMPHIS • ATLANTA • JERSEY CITY
• LOS ANGELES • SAN FRANCISCO • HOUSTON

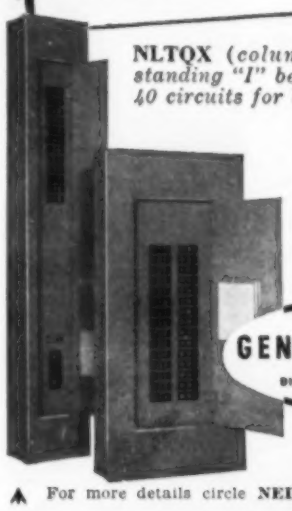
OTHER FORT WORTH PRODUCTS: ROLLER CHAIN SPROCKETS, SCREW CONVEYORS and ACCESSORIES, SCREW ELEVATORS

For more details circle **NED-899 K3** on enclosed inquiry slip

Check these features of

Trumbull NLTQ Lighting Panelboards

- Incorporate Trumbull TQL plug-in circuit breakers with thermal-magnetic trip, trip-free action, trip indicating position, manual re-set.
- Readily removable interiors, with busbars molded in plastisol (run cooler than in open air).
- Protected barriers, integral with front.
- Breaker knockouts in front panel to provide for future circuits.
- Compact boxes with adequate knockouts and gutters.



NLTQX *(column type) Panelboards fit standing "I" beam. Available in from 4 to 40 circuits for both 3- and 4-wire services.*

NLTQ *Panelboards: Available in from 4 to 42 circuits for both 3- and 4-wire services with lugs only, or 50 to 225 ampere breakers in mains and 10 to 50 ampere breakers on branches. AC only.*

GENERAL ELECTRIC
DISTRIBUTION ASSEMBLIES DEPARTMENT PLAINVILLE, CONN.

Sold everywhere through leading distributors. Let us mail you Bulletin TEB-14.

For more details circle **NED-900 K3** on enclosed inquiry slip

2 OUTSTANDING PLASTICS INJECTION MOLDING MACHINES

THE LEWIS "6"

features the exclusive new "HYDRA-LOCK" clamping mechanism and does the work of much larger units at a fraction of their initial and normal operating costs. Its fast injection system, 200-ton clamp, automatic molding cycle and versatility assure high volume production of large projected area parts (up to 7.75 oz. polystyrene) with maximum efficiency and safety.

THE LEWIS "4"

is the lowest cost machine available today for production molding of precision lightweight large-area parts. It will produce 2 to 3-ounce parts in molds originally designed for 8-ounce machines. Model "4" handles almost any molding material . . . is easy and safe to operate . . . requires only 16 square feet of floor space.

1456-LW

WRITE FOR THESE BULLETINS FOR COMPLETE DETAILS.

LEWIS WELDING & ENGINEERING CORP.
14 Interstate St. • Bedford, Ohio

Gentlemen:
Please send me without obligation:
☐ Bulletin 101 describing Model "4"
☐ Bulletin 102 describing Model "6"

Name _____ Title _____
Company _____
Address _____
City _____ State _____

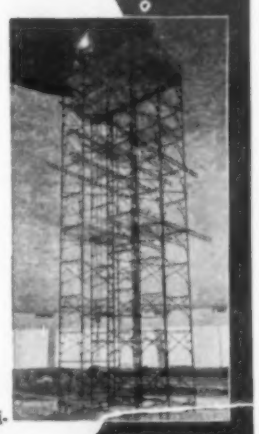
LEWIS

THE LEWIS WELDING & ENGINEERING CORPORATION

For more details circle **NED-901 K3** on enclosed inquiry slip

COST CUTTING BECOMES SIMPLE ARITHMETIC

WITH ADVANCE SCAFFOLDING



The ability to make money is built into ADVANCE tubular steel scaffolding. Each feature — self-contained, simple to operate Cam Locks . . . trigger action panel attaching Stack Locks — is employed so as to assure user-profit. Unequaled acceptance and repeat rentals by building management and maintenance men prove that ADVANCE scaffolding is best for any construction and maintenance problem.

Are you getting in on the simple arithmetic that spells savings in dollars for scaffolding users? ADVANCE can help you get started!

Write direct for free literature, engineering and specification data.

BEAVER ADVANCE

ADVANCE SCAFFOLD DIVISION
Beaver Art Metal Corp., Ellwood City 5, Pa.

For more details circle NED-902 K3 on enclosed inquiry slip

Femco COMMUNICATION

Femco CRANEPHONES
Talk from cab to floor and cab to cab

Femco AUDIOPHONES
Fixed-point industrial communication

Efficiency is improved—production goes up, when Femco equipment is installed. Consider: as many mike-speaker stations as you need, moving or stationary, anywhere in your plant, office or yard.

Femco PAGEPHONES
Flexible inter-com and page systems

DEMONSTRATIONS ARRANGED

ASK FOR YOUR FEMCO DATA KIT

Femco PORTAPHONES
Movable as your work progresses

FARMERS ENGINEERING & MANUFACTURING COMPANY
IRWIN, PENNSYLVANIA

SPECIALISTS IN ELECTRONIC Communication and Control

For more details circle NED-903 K3 on enclosed inquiry slip

with Veelos on your machines
v-belt adjustment is a production-saving job

ALL V-BELTS STRETCH. With endless v-belts there's nothing you can do to take up this stretch once the motor has been "run-out". But with Veelos the adjustment is in the belt itself—even sliding motor bases are unnecessary.

Changing the length of each Veelos v-belt by just adding or removing links is the best, most efficient, way to keep the belts correctly matched. Using Veelos means that the job of adjustment is done easily and quickly... with the least amount of machine down-time.

Write for your copy of the Veelos Data Book—it gives file-worthy product and engineering facts which you should have handy. We'll be glad to send you a copy.

VEELOS THE LINK V-BELT

MANHEIM MANUFACTURING AND BELTING CO.
650 Manheim Street, Manheim, Pa.

Adjustable to Any Length • Adaptable to Any Drive

For more details circle NED-904 K3 on enclosed inquiry slip

New Literature & Catalogs

Steam Boilers

Mears, Kane, Ofeldt, Inc.—Oil or combination oil and gas fired steam boilers are described and illustrated in bulletin 7D. Units are of the vertical type, built for standard delivery pressures up to 100 psi and are available with ASME ratings between 4 and 24.1 hp.

For more details circle NED-905 K3 on enclosed inquiry slip

Rotary Tools

Franklin Balmar Corp., N. A. Strand Div. — Rotary tools for use with Strand flexible shaft machines and the Diskette portable electric tool are subject of 12-page illustrated booklet. They include carbide filers and cutters and a line of woodcarving and solder cutting attachments. Specifications are given in full, together with cutting speed recommendations and related data.

For more details circle NED-906 K3 on enclosed inquiry slip

High Temperature Fastenings

H. M. Harper Co.—16-page bulletin HTA reviews and illustrates high temperature and corrosion resistant alloys such as Inconel, Discaloy, A-286 and titanium as applied to high temperature bolting and general fastening. Tables give mechanical properties and chemical composition of various alloys.

For more details circle NED-907 K3 on enclosed inquiry slip

Air Gaging Heads

Sheffield Corp.—For use in conjunction with Precisionaire and other air gages, Plunjet gaging heads described in 24-page illustrated booklet can be applied to a wide range of gaging, tooling and fixturing, including machine control applications. Units are compact, can be used in single or multiple setups, and are available for tolerances ranging from 0.0001 to 0.100-in.

For more details circle NED-908 K3 on enclosed inquiry slip

Roll-Formed Aluminum Shapes

Reynolds Metals Co.—Ranging from television antenna tubing to parts for trucks and trailers, continuous roll-formed aluminum shapes are described in 8-page illustrated bulletin. Process makes available a wide variety of cross-sections in any length, and bulletin emphasizes design flexibility, good dimensional accuracy and durable finishes. Production facilities and processes are also shown.

For more details circle NED-909 K3 on enclosed inquiry slip

Adjustable-Voltage Drives

Westinghouse Electric Corp.—Designed for variable speed applications, packaged adjustable-voltage drives are subject of 16-page illustrated booklet B-5808. Construction, applications, operation and advantages are discussed. Special options such as inching, reversing and dynamic braking which can be incorporated are also described, and case histories of industrial uses given.

For more details circle NED-910 K3 on enclosed inquiry slip

Jig & Fixture Details

Harco Engineering—26-page illustrated catalog and price list provides complete information on a line of jig and fixture details. These include rest buttons, fixture keys, swivel screws, dog point screws, hand knobs, crank handles and alloy steel studs. Cadmium plating, heat-treatment and oxide finishes are available. Catalog gives full scale drawings which can be used for tracing purposes.

For more details circle NED-911 K3 on enclosed inquiry slip

Sheet Metal Fastening Tools

Wedgelock Co.—16-page illustrated catalog on sheet metal fasteners and assembly tools gives data on standard spring and wingnut operated holders, together with plier and air applicators. Also included are drill stops, jig pins and anchor nut drill jig fasteners. Fasteners can be applied in blind hole locations.

For more details circle NED-912 K3 on enclosed inquiry slip

Steel Shot Abrasive

American Wheelabrator & Equipment Corp.—Characteristics of steel shot as a blast cleaning and peening abrasive are the subject of illustrated 8-page bulletin No. 89. Costs and test procedures are shown, together with a photographic comparison of the useful lives of different abrasives and other relevant application factors.

For more details circle NED-913 K3 on enclosed inquiry slip

BREEZE Job-Engineered BELLOWS

...Give LASTING PROTECTION Where Ordinary Bellows Fail

Breeze welded diaphragm bellows meet the operating life cycle of any equipment in which they are used *because every Breeze bellows design is individually engineered and built for the job.*

Breeze has no "stock bellows," but if you have a vibration problem in ducts, large or small, or want permanently sealed valve enclosures in any type of piping system, or need bellows for torque transmission or other uses, Breeze experience can quickly provide the answer . . . and production can meet your requirements.

A Breeze bellows is dependable because each diaphragm is designed to work well within its elastic limit. This is accomplished by thorough analysis of each application and careful design of the bellows to withstand all requirements. "Job engineering" each individual type eliminates makeshifts, assures efficient performance.

Breeze bellows are made in stainless steel, inconel, monel, nickel, steel, or other weldable alloys.

Feel free to consult us without obligation on your existing bellows requirements, or any other project where reliable welded diaphragm type bellows might solve a design problem.

BREEZE CORPORATIONS, INC.
41-S. Sixth St., Newark 17, N. J.

OTHER BREEZE PRODUCTS: ACTUATORS • RADIO SHIELDING • AERO-SEAL HOSE CLAMPS

For more details circle NED-914 K3 on enclosed inquiry slip

SUNNEN® HONING

SUNNEN HONING MACHINES "Accuracy at Low Cost"

• SPEEDS Machine Assembly
• SIMPLIFIES Field Maintenance

PROBLEM: Hold close hole tolerance and good surface finish on button-hole machine part, to provide perfect interchangeability for easy assembly of new machines and repair in the field.

MATERIAL: Aluminum Alloy, SAE 26 • HOLE DIAMETER: 11/32"
HOLE LENGTH: 1.0" • STOCK REMOVAL: .0003" to .0005"
FINISH: 16 Micro-inches • TOLERANCE: .3438" to .3442"
MANUFACTURER: Reece Corp., Waltham, Mass.

SOLUTION: Sunnen Model MBB-1290 Honing Machine with Standard K10 type mandrel and honing stone, plus Sunnen Honing Oil.

RESULTS: 110 parts per hour—virtually no rejects. Sunnen Honing has proved the most practical way to manufacture these parts at a cost that is competitive. This method was so successful that Reece has designed many other parts specifically for honing.

You'll find Sunnen Honing Machines economical for job lots or long production runs . . . for everything from de-burring to micro-fitting. They are frequently the solution to production problems that cannot be handled by drilling, reaming, boring, lapping or grinding.

These machines generate geometrically perfect holes with fast stock removal . . . produce a guaranteed accuracy of .0001" or better and surface finish to 2 micro-inches RMS . . . have a diameter range of 1/8" to 2 5/8" . . . require no jigs or fixtures. Average installation costs less than $1,000.

Other Parts Honed at Reece Corp.

743A

Sunnen Honing Machines may be *your* answer, too.

Send for FREE BOOKLET

SUNNEN® PRODUCTS COMPANY
7969 Manchester Avenue, St. Louis 17, Missouri
Canadian Factory: Chatham, Ontario

For more details circle NED-915 K3 on enclosed inquiry slip

Threaded fasteners —like trees— need strong roots

Threaded fasteners subject to stress and wear in nonferrous materials, require some sort of hard bushing as a base for the tapped thread.

Of various types of bushings available for use with aluminum, plastics and similar materials, the Tap-Lok Insert is unique for simplicity and ease of installation and rigidity in use. Being self-tapping, it saves the cost of the separate tapping operation and avoids the danger of crossing threads. Secondary operations are unnecessary.

The Insert withstands vibration without loosening and has maximum torque-and-pull resistance. It is completely free from the time-wasting failures of cast and molded inserts.

It is used in large volume as original equipment, in production salvage, and maintenance. It is easily inserted with a simple driving tool operated by hand or power.

Send for descriptive folder.

ALSO MANUFACTURERS OF GROOV-PINS FOR POSITIVE LOCKING PRESS FIT.

GROOV-PIN CORPORATION

1126 Hendricks Causeway, Ridgefield, N. J.

For more details circle NED-916 K3 on enclosed inquiry slip

Can WIRE help you to
. . . A BETTER PRODUCT?
. . . A BETTER PRICE?
. . . A BETTER PROFIT?

Here's just one case where it did!

The motor mount shown here was sent to Titchener with the request to design a wire fan guard to be attached. Titchener engineers suggested a *combination* guard and motor mount (below, right). It was lighter, safer, more attractive, of simple one-piece construction . . . *and much lower in cost* than the original design. The manufacturer now buys this mounting in several sizes from Titchener & Co.

TRY THE "TITCHENER TEST" Perhaps you have a design or cost problem. Perhaps it can be solved with wire, strip steel, or a combination of the two. Our engineers will be glad to work with you . . . just send us prints or samples. Complete analysis, recommendations and quotations will be made without cost or obligation.

WIRE GOODS Headquarters for 67 years to the most famous names in industry.

FREE HANDBOOK—"Use of Wire Construction in Product Design"—20-page illustrated handbook sent free to engineers, purchasing agents and production men. Write to . . .

E. H. TITCHENER & CO.
79 Clinton St. Binghamton, N.Y.

For more details circle NED-917 K3 on enclosed inquiry slip

Announcing...
2 NEW MODELS IN ROPER 3600 SERIES

NOW! SIZES #5 and #6 WITH CAPACITIES 70 TO 226 G.P.M. AT 60 P.S.I. FOR WIDER RANGE OF INDUSTRIAL APPLICATIONS

FEATURES

- Compact . . . requires minimum installation space
- Totally-enclosed gear reduction running in oil
- Anti-friction bearings throughout gear reduction
- 3 gear reductions for each size are interchangeable
- Operates indoors or outdoors — no pump house needed
- Sturdy bedplate provides rigid mounting for pump and motor
- Unusually smooth and quiet operation

Send for Catalog

GEO. D. ROPER CORPORATION
670 BLACKHAWK PARK AVE.
ROCKFORD, ILLINOIS

ROPER Rotary Pumps

For more details circle NED-918 K3 on enclosed inquiry slip

New Processes & Materials

INDUSTRIAL WIPER
paper product has wet strength

Highly absorbent and easily disposable, Scott industrial paper wiper features wet strength and maximum dirt retention. Each wiper consists of two "Perf - Embossed" (see inset) sheets, packaged 125 to the box. Wipers can be used to wipe work, hands, face or glasses. When one wiper is removed, another "pops up" for instant removal. Made by **Scott Paper Co.**, Dept. NED, Chester, Pa.

For more details circle NED-919 K3 on enclosed inquiry slip

MICARTA LAMINATE
utilizes glassmat reinforcement

Combining toughness, high impact strength, good electrical insulating properties and good moisture resistance, Micarta grade 20608 is useful where a high strength insulating laminate is required as in circuit breakers, coil washers and rotor wedges. It has a glassmat reinforcement and is available in 28 by 37-in. panels between 1/16 and ¾-in. thick. For a panel ⅛-in. thick, moisture absorption is 0.35 per cent and the dielectric strength is 350 v per mil. Made by **Westinghouse Electric Corp.**, P. O. Box 2099, Pittsburgh 30, Pa.

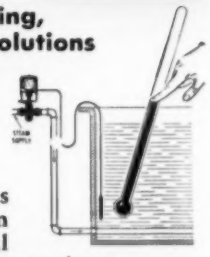
For more details circle NED-920 K3 on enclosed inquiry slip

SIMULATED MARBLE PRODUCT
applied quickly with adhesive

Affording unlimited possibilities for beautifying and renovating furniture, interior and exterior wall surfaces, Calimarb simulated marble product duplicates graining and smooth surface of marble. A polyester resin material, it does not break easily; resists heat, stains, weather and rot; has tensile strength greater than steel on a weight per weight basis; and is easy to clean. No two pieces have identical graining. Product is applied by an adhesive process and is offered in white, black, green and reddish brown. Made by **Caligari Products**, Dept. A-5, 806-808 W. 21st St., Norfolk, Va.

For more details circle NED-921 K3 on enclosed inquiry slip

For Plating Anodizing, Bonderizing, Pickling, Cleaning and Rinsing Solutions



POWERS No. 11-MF Regulators insure most effective use from various solutions by holding them at the right temperature automatically. They save Steam and Labor.

Plastic Thermal Bulb and Tubing is highly resistant to solutions used in above processes. Prevents electrical shorts. No insulators required for the regulator.

Easy to Read 4" Dial Thermometer indicates temperature of liquid being controlled and makes it easy to adjust regulator for different temperatures.

Bulletin 330 fully describes this simple, self-operating regulator. May we send you a copy? (b30)

THE POWERS REGULATOR CO., SKOKIE, ILL.
Offices in over 50 Cities, see your Phone Book • Established in 1891

For more details circle NED-922 K3 on enclosed inquiry slip

PANTOGRAPHIC PROFILING ON METALS AND PLASTICS

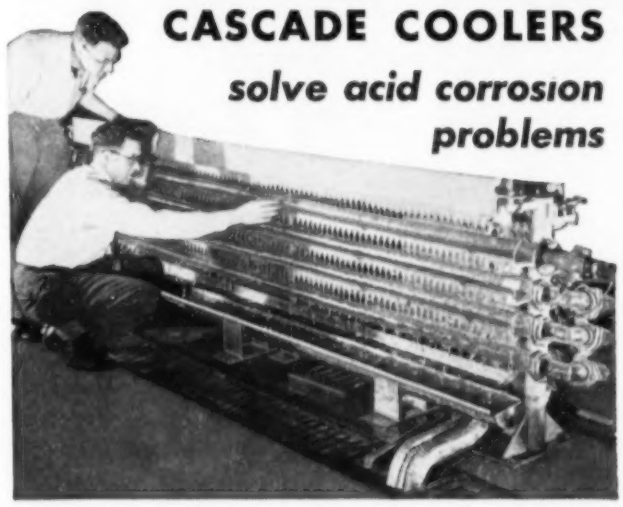
rapidly done by unskilled labor with *new hermes* Engravograph

Write for literature
Bench Type Model H 58 (weight 200 lbs.)
Portable Model IM also available

NEW HERMES, INC. 13-19 University Place, N. Y. 3
Representatives in all principal cities. Canada—359 St. James St., Montreal

For more details circle NED-923 K3 on enclosed inquiry slip

PYREX® brand Glass CASCADE COOLERS
solve acid corrosion problems



Cascade Coolers made of PYREX brand glass piping offer you *these 7 advantages:*

1. **Corrosion resistance**—PYREX brand Cascade Coolers give positive protection against corrosion by any fluid, except hydrofluoric acid and extremely strong caustics.
2. **Assurance of product purity**—Even the most sensitive products cannot be contaminated by chemically stable glass. Glass neither gives nor takes color, odor, taste, or chemical components.
3. **Low first cost**—PYREX Cascade Coolers are low in first cost per BTU transferred. Their long service life further increases the economy. (Glass never wears out.)
4. **Low operating cost**—The corrosion resistance of PYREX pipe permits the use of low-cost river or sea water for coolant.
5. **Low maintenance cost**—The hard, smooth surface of glass resists fouling, assures easy cleaning.
6. **Application flexibility**—You can mount PYREX Cascade Coolers on floor, wall, or ceiling and easily expand them for larger capacities as your requirements increase.
7. **Easy assembly**—The average time required to level and assemble an 8-tube unit is only eight man-hours. No special experience or tools are required.

For full information, specifications, dimensions and nomographs, write Plant Equipment Sales Dept., Corning Glass Works, Corning, N. Y.

CORNING GLASS WORKS, Corning, N. Y.
Send booklet, "PYREX Cascade Coolers."
Name .....
Company .....
Street .....
City ..... Zone ..... State .....

CORNING GLASS WORKS
CORNING, NEW YORK
Corning means research in Glass

For more details circle NED-924 K3 on enclosed inquiry slip

FREE CATALOG... New Coated Abrasive Selector by CARBORUNDUM

Source: THE CARBORUNDUM COMPANY
Niagara Falls, New York

This new "Coated Abrasive Selector for the Average Grinding Job" helps you choose the right coated abrasive for any machine or hand abrasive operation—on metals, non-metallics, or wood.

The recommendations given are complete—including grain sizes and types, backings, coatings, product sizes, prices and packaging information. Metalworking recommendations include coated abrasives for hand, portable and disc sanding; and for contact wheel, platen, and slack-of-belt machine grinding. Recommendations for roughing, polishing, and finishing glass and other non-metallic materials are also shown. For woodworking, coated abrasives are listed for hand sanding and finishing, and machine sanding with the following types of sanders: oscillating, flat belt, edge, turning, moulding, drum, disc, and others.

A special section lists contact wheels—both solid and universal hub, serrated and plain. The "61" Port-A-Belt grinding attachments are also described fully. In addition, you will find a list of machine manufacturers—giving machine model numbers and belt sizes.

It's free! Get this handy catalog today. Write to Dept. NED 82-310.

"Carborundum" and "Port-A-Belt" are trademarks of The Carborundum Company, Niagara Falls, New York

82-310

For more details circle **NED-925 K3** on enclosed inquiry slip

CINCINNATI ALL-STEEL PRESS BRAKES

feature center line construction motorized ram adjustment with micrometer registers at each end, automatic lubrication weld free joints and other profitable features.

Write for Catalog B-4

THE CINCINNATI SHAPER CO.
CINCINNATI 75, OHIO, U.S.A. SHAPERS • SHEARS • BRAKES

For more details circle **NED-926 K3** on enclosed inquiry slip

COUNTING the pulse of INDUSTRY

Productimeters register accurate count of every unit processed . . . eliminate profit-eating losses . . . insure economical plant operation and maximum use of man-hours. There's a size and style to suit every need.

Send for Catalog No. 101

DURANT MANUFACTURING CO.
1922 N. Buffum Street
Milwaukee 1, Wis.
122 Orange Street
Providence 3, R. I.
Representatives in Principal Cities

PRODUCTIMETERS
SINCE 1879 *Count Everything*

For more details circle **NED-927 K3** on enclosed inquiry slip

New Literature & Catalogs

Installation & Care of Packings

United States Rubber Co., Mechanical Goods Div.—112-page book presents much information on the proper installation and care of packings for various applications. Engineering tables, conversion charts, maintenance data and chart of chemical resistance of gasket materials and 4-page index are included.

For more details circle **NED-928 K3** on enclosed inquiry slip

Time Delay Switch

Elastic Stop Nut Corp. of America, AGA Div.—Subject of 4-page illustrated bulletin SW-2 is the Agaswitch, a device for introducing a manually or mechanically initiated adjustable time delay into an electrical circuit. Two types are covered, both having delay period adjustable from 0.1 to over 10 seconds. Mounting, electrical and application data are included.

For more details circle **NED-929 K3** on enclosed inquiry slip

Coarse vs. Fine Threads

Heli-Coil Corp.—"Which Thread . . . Coarse or Fine" is a 4-page bulletin that is a study on the relative merits of coarse vs. fine threads. Factors discussed are torque effort, adjustment of bolt tension, losening in vibration, load distribution on successive threads, static tensile strength, fatigue strength, corrosion resistance, control of blank for threading, damage in handling, stock simplification and ease of assembly.

For more details circle **NED-930 K3** on enclosed inquiry slip

Hydraulic Controller

Askania Regulator Co.—A self-contained hydraulic controller for automatic pressure, flow and proportioning control is subject of 8-page illustrated bulletin 155. Operating principles and different models are described and application diagrams and specifications are given.

For more details circle **NED-931 K3** on enclosed inquiry slip

Industrial Gloves & Mittens

Fairfield Glove Co.—20-page well-illustrated 1953-54 catalog lists a wide variety of industrial gloves, among others, suited to many diversified uses. Included are cotton gloves with knit wrists, band tops and gauntlets; hot mill gloves; smelter's mittens; asbestos gloves; double palm gloves; jersey gloves and mittens; neoprene, rubber and plastic gloves and mittens; leather welders gloves and others.

For more details circle **NED-932 K3** on enclosed inquiry slip

Making Plant Operations Automatic

CDC Control Services, Inc.—Specialized engineering service for making plant operations automatic is detailed in 8-page illustrated brochure "A Proposal for Managements with Vision." Service consists of consultation, analysis, design and construction in the automatic control field.

For more details circle **NED-933 K3** on enclosed inquiry slip

Power Tools

Boice-Crane Co.—52-page catalog of power tools, designated as No. 53, carries descriptions of band and contour saws, band filers, drill presses, tool and knife grinders, jig saws, jointers, lathes, planers and belt, drum and spindle sanders. Also covered are saw jointers, saw tables, shapers and shaper cutters. Wood, metal, fiber and plastics can be processed by these tools.

For more details circle **NED-934 K3** on enclosed inquiry slip

Industrial Wheels

Goddeyne Wheel Products—A complete line of industrial wheels of both welded and bolted construction with pneumatic or semi-pneumatic tires is described and illustrated in catalog 53. Wheels range in size from 6 to 16 in. OD, and many bearing and hub styles are available. Both swivel and rigid mounted casters are also included.

For more details circle **NED-935 K3** on enclosed inquiry slip

Industrial Crushers

A handbook which shows how best to apply various types of crushers to specific jobs is now available. Such factors as power consumption, parts wear, maintenance cost and product uniformity are discussed in detail, together with such crusher units as hammermills, jaws, impactors and rolls. For your copy write on company letterhead to Pennsylvania Crusher Co., 1762 Liberty Trust Bldg., Philadelphia 7, Pa.

For more details circle **NED-936 K3** on enclosed inquiry slip

Standard's Endless, Versatile, Variations of Design, Arrangement and Equipment best describe this new automatic line of STANDARD Rotamatic Grinders. Versatility permits application to a wide variety of work. No doubt you have grinding problems that Rotamatic can solve quickly and efficiently. Write us today for Catalog AG and complete details.

- ASSN Spindle Nose
- Rotary Magnetic Chucks
- Complete Hydraulic Operation
- Also 10", 12", 16" & 18" standard Rotary Surface Grinders

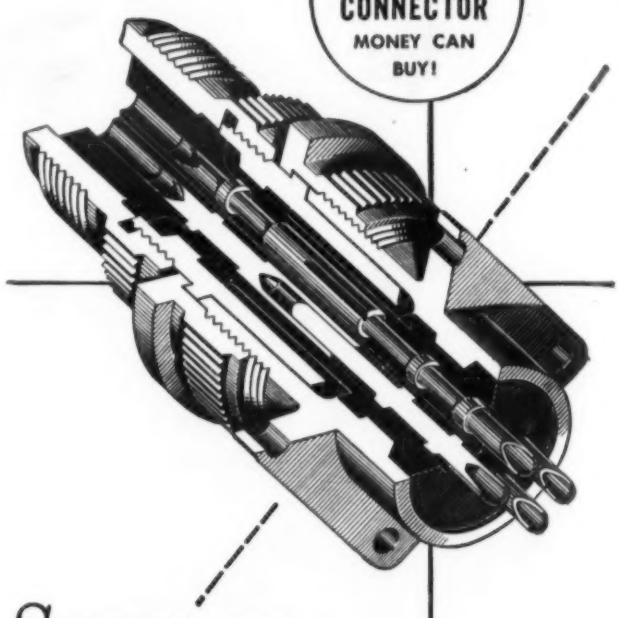
Type B Rotamatic Grinder

Standardize with the **STANDARD** electrical tool co.
MACHINE TOOLS
2488 RIVER ROAD • CINCINNATI 4, • OHIO

See this machine in operation; National Metal Exposition, Cleveland; Oct. 19-23, Booth 840.

For more details circle **NED-937 K3** on enclosed inquiry slip

The Finest **ELECTRICAL CONNECTOR MONEY CAN BUY!**



SCINFLEX **ASSURES YOU PEAK PROTECTION AGAINST CIRCUIT FAILURE**

When operating conditions demand an electrical connector that will stand up under the most rugged requirements, always choose Bendix Scinflex Electrical Connectors. The insert material, an exclusive Bendix development, is one of our contributions to the electrical connector industry. The dielectric strength remains well above requirements within the temperature range of −67°F to +275°F. It makes possible a design increasing resistance to flashover and creepage. It withstands maximum conditions of current and voltage without breakdown. But that is only part of the story. It's also the reason why they are vibration-proof and moisture-proof. So, naturally, it pays to specify Bendix Scinflex Connectors and get this extra protection. Our sales department will be glad to furnish complete information on request.

• Moisture-Proof • Radio Quiet • Single Piece Inserts • Vibration-Proof • Light Weight • High Insulation Resistance • High Resistance to Fuels and Oils • Fungus Resistant • Easy Assembly and Disassembly • Fewer Parts than any other Connector • No additional solder required.

BENDIX SCINFLEX ELECTRICAL CONNECTORS

Bendix
SCINTILLA MAGNETO DIVISION of *Bendix* AVIATION CORPORATION
SIDNEY, NEW YORK

Export Sales: Bendix International Division, 205 East 42nd St., New York 17, N. Y.
FACTORY BRANCH OFFICES: 117 E. Providencia Ave., Burbank, Calif. • Stephenson Bldg., 6560 Cass Ave., Detroit 2, Michigan • Brouwer Bldg., 176 W. Wisconsin Avenue, Milwaukee, Wisconsin • 582 Market Street, San Francisco 4, California.

For more details circle **NED-938 K3** on enclosed inquiry slip

strong • light

Nylon cable clips

RESIST HEAT, COLD, CHEMICALS

11 sizes 3/16" to 2"

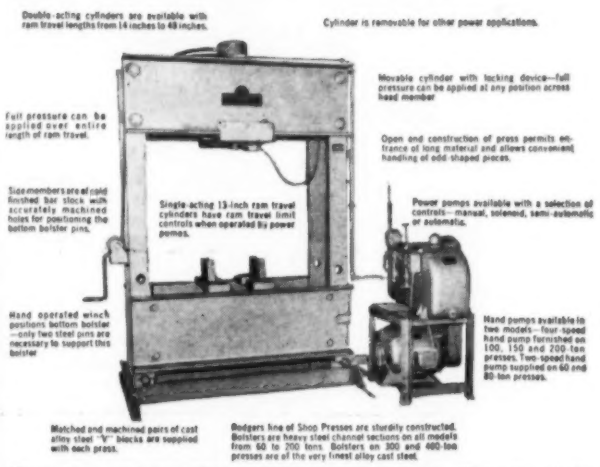
BURNDY

NORWALK, CONNECT.

▲ For more details circle NED-939 K3 on enclosed inquiry slip ▲

No other shop presses

GIVE YOU ALL THESE PERFORMANCE FEATURES!



Although you can't see performance by looking at a press, you can see the features which make outstanding performance possible. That's why we illustrate here, a few of the many features incorporated in Rodgers Hydraulic Shop Presses. They are an exclusive combination of features that insure top performance, high efficiency and long, trouble-free service. Many other important features of Rodgers Shop Presses are shown in the new illustrated Catalog No. 313A. Write today for your free copy and then compare—point for point—feature for feature.

Rodgers Hydraulic, Inc.

7425 Walker St., St. Louis Park, Minneapolis 16, Minn.

▲ For more details circle NED-940 K3 on enclosed inquiry slip ▲

thousands of users PROVE "HI-TEMP" C-5 THREAD COMPOUND IS BEST FOR ALL STUD THREADS and STAINLESS STEEL APPLICATIONS

✔ speeds up dis-assembly time
✔ prevents stud breakage
✔ eliminates pitting of stainless steel

NO MORE FROZEN OR GALLED STUDS ... EVEN AT 1800° F

Let us SEND you a FREE SAMPLE so you can PROVE to YOURSELF that C-5 will lick your toughest stud breakage problems!

To assure easy maintenance on products having threaded assemblies many leading product engineers have specified the use of Fel-Pro C-5 as an anti-seize coating on stud threads prior to final production line assembly.

Fel-Pro's exclusive Colloidal-Copper formula allows for easy separation and reduces stud breakage of threaded assemblies after long exposure to extreme temperatures. It eliminates pitting of stainless and alloy steel even where dissimilar metals are joined.

Conduct your own tests with C-5 "Hi-Temp" at our expense. Write for Free Sample and complete data sheet TODAY!

FELT PRODUCTS MFG. CO. 1510 Carroll Ave., Chicago 7, Ill.

▲ For more details circle NED-941 K3 on enclosed inquiry slip ▲

New Processes & Materials

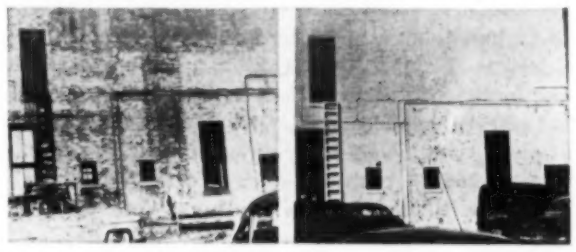
RUSTPROOFING COMPOUND for protecting ferrous metals

A chemical rustproofing treatment for iron and steel articles, Endurion depends on immersion techniques and is reported to give salt-spray test ratings approaching those obtainable by electroplating. It can be applied in integral colors ranging from gray and black through blue, green and olive drab, and gives uniform protection on all surfaces reached. It does not hinder assembly by building up threads or other close-fitting surfaces and provides a good base for bonding paint. Made by **Rust-Proofing & Metal Finishing Corp.**, 76 Commercial Ave., Cambridge 42, Mass.

▲ For more details circle NED-942 K3 on enclosed inquiry slip ▲

MASONRY COATING waterproofs and bridges cracks

Based on Vinylite resins, Secoton elastic membrane coatings are applied to masonry by spray and insulate against rain, sun and heat. In the "before and



after" view shown, the condition of the deteriorated brick wall was so improved that inside temperatures were reduced as much as 15° F. The coating, designed for one-coat applications, is flexible enough to withstand structural strains without rupturing and is also resistant to corrosive industrial gases and fumes. It is available in a variety of colors. Made by **Surface Engineering Co.**, Dept. NE-9, 1535-37 Barwise Ave., Wichita 1, Kans.

▲ For more details circle NED-943 K3 on enclosed inquiry slip ▲

POLYSTYRENE COATING is scratch and flame-resistant

Clear and transparent, BE-40 plastic coating treatment for polystyrene makes the surface scratch and flame-resistant. Resistance to physical abuse, high gloss and high adhesion are other properties. Coating can be applied by spray, brush or dip and after curing is immune to solvents such as ketones, aromatics and alcohols. It air-dries in about 15 minutes and then must be cured in an oven or under infrared lights. Recommended curing time is 1 hr at 150° F. It is available in 5 and 55-gal standard containers. Made by **Schwartz Chemical Co.**, 326-8 W. 70th St., New York 23, N. Y.

▲ For more details circle NED-944 K3 on enclosed inquiry slip ▲

INTRODUCING CADDY® TOGGLE CLAMPS

EXTRA LARGE PIVOT PINS
Up to 3 times more bearing surface than other clamps. In actual test under load, V-3 clamp withstood 250,000 cycles without excessive wear.

ALL WELDED CONSTRUCTION
Will not come apart even after pins become excessively worn.

DOUBLE CLAMPING PRESSURE
Design of linkage provides double the clamping pressure of competitive clamps at the same pressure on the handle.

HEAVIER LINKS AND HANDLE
Will withstand extreme abuse. Pipe extension handle may be used without damage to linkage.

REINFORCED CLAMP BAR
Eliminates weak point where pivot pins pass through bar.

HEAVIER FRAME
Will not spring or bend under maximum load.

FOR COMPLETE INFORMATION BULLETIN TC-6 ON REQUEST

DEALERSHIPS AVAILABLE

ERICO PRODUCTS, Inc.
2070 EAST 61st PLACE
CLEVELAND 3, OHIO

▲ For more details circle NED-945 K3 on enclosed inquiry slip ▲

DEBURRING Made Easy!

WRITE FOR ABRASIVE BELT GRINDER-POLISHER CATALOG

Hammond Machinery Builders INC.

1623 DOUGLAS AVENUE • KALAMAZOO MICHIGAN

See us at Booth 1150—National Metal Exposition

▲ For more details circle NED-946 K3 on enclosed inquiry slip ▲

Uncle Sam gets MORE than his money's worth... with MASTIPAVE

PABCO's super-tough, non-slip, resilient, low-cost FLOOR COVERING

Why has Uncle Sam, like private industry, purchased millions of yards of Pabco MASTIPAVE? Because Army and Navy installations, barracks, offices, hospitals, warehouses, require floor covering that can take the grueling kick, scrape and scruff of day-in, day-out destructive use. MASTIPAVE will prove to you in *dollar savings* why it is America's Number One low-cost, long-life floor covering. In rolls and tiles. Terra Cotta and Black. For full information on MASTIPAVE...

FILL OUT THIS COUPON

PABCO PRODUCTS INC.
New York 16 • Chicago 54 • San Francisco 19
(Mail to Dept. B nearest office)

GENTLEMEN: Without cost or obligation to me, please send your folder, "Every Building needs Pabco MASTIPAVE."

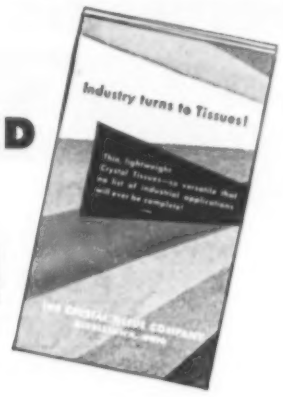
NAME _____

ADDRESS _____

CITY _____ STATE _____

▲ For more details circle NED-947 K3 on enclosed inquiry slip ▲

GET THIS FACT-FILLED FOLDER FREE!



Bring yourself up to date on new applications for versatile, economical Crystal Tissues in industry. See how tissues have been successfully used by manufacturers *in their products, in product packaging materials,* and in *wrapping and packaging* countless products that range from hats to hardware. Get your free copy of this fast-reading folder—"Industry Turns To Tissues"—right away.

Crystal

THE CRYSTAL TISSUE COMPANY
Middletown, Ohio

For more details circle NED-948 K3 on enclosed inquiry slip

NORTHERN HI-LIFT OVERHEAD CRANES

For Safety—Durability—Dependable Operation with minimum maintenance—these NORTHERN HI-LIFT CRANES are especially developed for low headroom operation and floor control. Let us send you further details in

BULLETIN HL-115-R

NORTHERN ENGINEERING WORKS, 2615 Atwater St., Detroit 7, Mich.

NORTHERN CRANES AND HOISTS

For more details circle NED-949 K3 on enclosed inquiry slip

SAW it ALL... and SAVE

with the KETT PANEL CUTTING SAW

no drilling!
no filing!
no deburring!

Exclusive features save you time and money. Just "plunge" right in and cut everything from cardboard to steel. Zip around curves and contours . . . through the toughest cutting job far quicker and easier. Typical capacities: 12 ga. steel, 3/16" aluminum, 1/4" Masonite, plywood, Mirawal Fiberglas and plastics. Interchangeable blades permit cutting soft rigid materials up to 1/2" . . . blades for tempered or soft aluminum, copper, brass, lead, etc. Your electric or pneumatic drill motor can power the KETT Saw. Write for Catalog E-22.

THE KETT TOOL COMPANY • East Third St., Cincinnati 2, Ohio

For more details circle NED-950 K3 on enclosed inquiry slip

New Literature & Catalogs

Magnesium Loading Ramps

Magline Inc.—Portable magnesium ramps which can be moved by one man for such work as loading and unloading yard cars and highway trucks are described and illustrated in bulletin DB-211. Eight units are featured, with standard lengths of 30 ft, widths of either 60 or 70 in., and load capacities per axle from 5000 to 13,000 lb. Magnesium bridges, drawbridges and catwalks are also described.

For more details circle NED-951 K3 on enclosed inquiry slip

Process Industry Meters & Controls

Bailey Meter Co.—In 16 illustrated pages, bulletin No. 17-E features a complete line of indicating, recording and controlling instruments for the process industries. Flow, pressure and temperature, ratio, speed and level indication units are among the many instruments described with ranges and basic specifications. Detailed literature references are given for all units.

For more details circle NED-952 K3 on enclosed inquiry slip

Glass-to-Steel Hermetic Terminals

Fusite Corp.—Ten different groups of hermetically sealed glass-to-steel electrical feed-through terminals are described and drawn in detail in 20-page catalog. These include miniature singles, standard size singles, stand-offs, threaded bushing, multiples, miniature multiples, plug-ins and crystal can headers. Terminals are used to obtain a hermetic seal that can be soldered or welded into a container and provide a seal, insulation and current carrying electrodes all in one piece.

For more details circle NED-953 K3 on enclosed inquiry slip

Portable Air Heaters

American Air Filter Co., Herman Nelson Div.—"Guide to the Selection and Use of Portable Space Heaters" not only deals with the heat output and portability of the units, but stresses the safety of the heater, as well. Intended for preheating engines and equipment, warehouses, drying materials and other uses, the heaters feature "sealed flame" principle, automatic controls and vents to carry off combustion products. The 36-page manual is well illustrated.

For more details circle NED-954 K3 on enclosed inquiry slip

Industrial Rubber Products

Atlantic India Rubber Works, Inc.—158 pages of illustrated wirebound catalog 52 contain a wealth of information on molded and fabricated industrial rubber products made of natural and synthetic rubbers. Hundreds of stock items are described and pictured, and company has thousands of molds for other products on hand. Among products covered are sheets, slabs, cylinders, sponge rubber, cups, bumpers, feet, rings, pads, strips, mallets, washers, etc., etc. Properties of various compounds are included.

For more details circle NED-955 K3 on enclosed inquiry slip

Electrical Connectors

Aircraft-Marine Products, Inc.—Developed particularly for the electronics and communications fields, self-locking taper connectors are described in 8-page illustrated bulletin. They combine miniature size with this self-locking action and are used primarily as connectors for individual wires. They are reported to possess high resistance to pull-out and vibration, also good electrical characteristics.

For more details circle NED-956 K3 on enclosed inquiry slip

Intricate Stampings & Wire Forming

Pix Mfg. Co.—16-page well-illustrated catalog pictures and describes the variety of precision formed wire and stamped products available on contract service. Intricate wire work can be done with wire diameters from 0.002 to 0.156-in., while stampings average 0.005 to 0.125-in. thick with diameters of 1/4 to 3 in. Slotting tolerances can be held to 0.001-in. Company press capacity ranges to 150 tons.

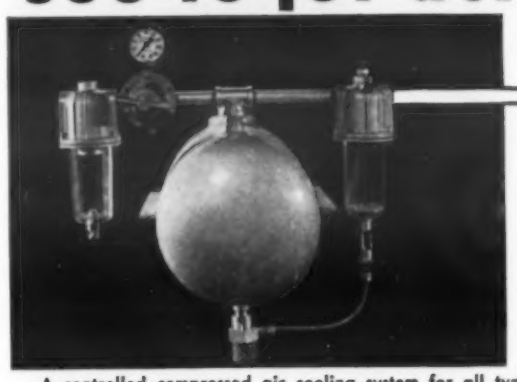
For more details circle NED-957 K3 on enclosed inquiry slip

Gasoline Engines

Twin Coach Co., Fageol Products Div.—Horizontal and vertical models of the 404, 451 and 477-cu in. Fageol gasoline engines for stationary, automotive and marine applications are subject of 6-page folder L-7696. Engines are of four-cycle, six-cylinder, valve-in-head design with water cooling, and are rated 180, 200 and 210 bhp, respectively.

For more details circle NED-958 K3 on enclosed inquiry slip

see lo-jet acro!



A controlled compressed air cooling system for all types of metal cutting with special ACRO-COOLANT soluble solution that

KEEPS CUTTING TOOLS AND WORK COOL

- speeds production
- cuts costs
- used for all machinery operations
- keeps work clean
- cuts tool breakage loss
- prolongs tool life

one unit can service 8 operations

Our engineering staff will cooperate FREE of charge
Send blueprints for estimate.

Write now for more information at no obligation to you!

AIR CONVERSION RESEARCH CORPORATION
4107 North Damen Ave., Dept. NE, Chicago 18, Illinois

For more details circle NED-959 K3 on enclosed inquiry slip

FOR BORING CAST IRON, NONFERROUS, AND THE HARDER TYPES OF STEELS AND MATERIALS

use BOKUM CARBIDE-TIPPED BORING TOOLS

Bokum carbide-tipped boring tools are designed on a mathematical formula which guarantees the correct cutting and clearance angles throughout entire life of the carbide tip.

Clearances remain uniform throughout repeated resharpening.

The carbide inserts are brazed in special alloy steel heat-treated bodies having the same expansion and contraction qualities as the carbide tip. This prevents tip from cracking when it heats up.

A wide range of sizes is available for boring holes from 1/16" diameter up.

Send for Cat. 398-6 for complete information. And for supplement No. 1 to 398-6 for information about tools for jig borers put up in 16 sets of varied assortments. Tools for lathes in 8 sets of varied assortments.

BOKUM TOOL CO.
TRADE MARK REG. U. S. PAT. OFF.
SINGLE POINT BORING TOOLS—INTERNAL THREADING, BOTTOMING AND FACING TOOLS—CARBIDE TIPPED TOOLS
DEPT. T • 14775 WILDEMERE AVE. • DETROIT 21, MICH.

For more details circle NED-960 K3 on enclosed inquiry slip

HEAT THAT MOVES AROUND

THE fact that the discharge outlets of WING Revolving Unit Heaters keep the heated air in constant, gentle motion is one of the reasons why nationally known firms like the Budd Company have installed them in their plants, both at Philadelphia and in the one shown in this photograph, at Gary, Indiana. The big blanking and forming presses in this great plant present a natural barrier to ordinary fixed discharge heating systems, but not to the moving streams of heated air from the WING Revolving Heaters, even suspended, as they must be, far above the floor, to clear the cranes. That is equally true in the summer time when, with steam turned off, the cooling breezes from the revolving discharge outlets keep workers comfortable on the hottest days. Investigate. Write for Bulletin HR-6.

L. J. Wing Mfg. Co.
165 Vreeland Mills Road
Linden, N.J.

Factories: Linden, N.J. & Montreal, Canada
In Europe: Etab. Wanson, Brussels, Belgium

Wing

UNIT HEATERS FANS BLOWERS DRAFT INDUCERS TURBINES

For more details circle NED-961 K3 on enclosed inquiry slip

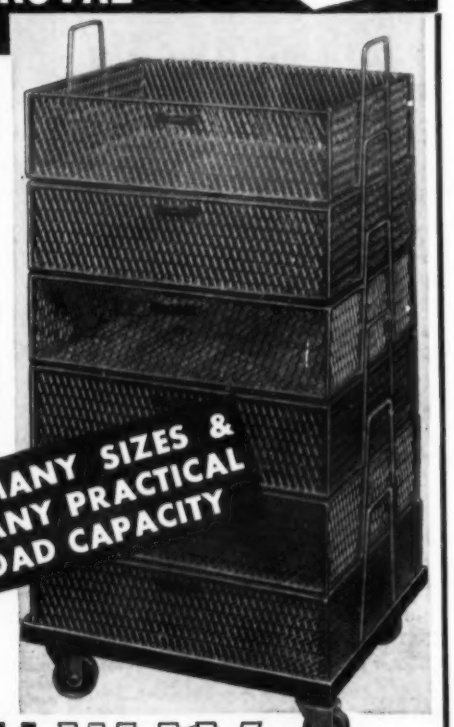
SPRACO NOZZLES

Write for NOZZLE CATALOG to
SPRAY ENGINEERING CO.
106 CENTRAL STREET • SOMERVILLE 45, MASS.

For more details circle NED-962 K3 on enclosed inquiry slip

WINNING WIDE APPROVAL

NEW WAY TO LOW COST materials handling



IN MANY SIZES & IN ANY PRACTICAL LOAD CAPACITY

ROLL WAY®

BASKET STACKS

"One of the best pieces of materials handling equipment we've seen in a long time."—"Roll-Way is the simplest, low cost way we've found yet to do the job." That's what experienced materials handling men are saying about Roll-Way Basket Stacks.

FEATURES—
Stack-lock handles—All welded construction—Reinforced corners—Expanded metal sides and bottom—Heavy duty dollie designed for 1, 2 or 4 basket stacks—Low in cost.

CHECK every operation in your plant and you will find dozens of places where Roll-Way will speed your out-put and cut your handling costs.

WRITE TODAY for descriptive bulletin and price list —no obligation.

HOFFMAN COMPANY
2588 W. PHILA. ST., YORK, PA.

For more details circle NED-963 K3 on enclosed inquiry slip

New Processes & Materials

PLASTIC SPRAYS in explosionproof cans

Available in clear, black, white and aluminum, Acrolite plastic sprays are packaged in explosion-proof cans. Acrylic finishes can be applied to wood, metal, paper and most other surfaces, drying to a durable waterproof finish in 5 minutes or less. Clear finish will waterproof and insulate wire and ignition systems, will prevent rust and tarnishing of metals and will protect leather and paper. Safety valve on can releases pressure gently when temperature reaches 210° F. Made by **Acrolite International,** Dept. A, 12 Hollywood Ave., Hillside, N. J.

For more details circle NED-964 K3 on enclosed inquiry slip

STRIPPABLE PLASTIC COATING for shipping protection of porcelain

For the protection of glass or porcelain-finished products, Copeel PV-294 white plastic coating can be applied up to ¼-in. thick with a 5-minute baking schedule at a 350° F temperature. It is easily stripped, and is useful for protecting finished parts and assemblies during both manufacture and shipping. Made by **Maas & Waldstein Co.,** 2130 McCarter Highway, Newark 4, N. J.

For more details circle NED-965 K3 on enclosed inquiry slip

MAGNIFYING LENSES for bifocal-wearing welders

Precision molded from Lucite, Ortho-Weld magnifying lenses for welders who wear bifocal glasses provide the magnification necessary for proper vision when the bifocal element of the glasses is out of the line of vision with welding helmet in working position. They are inserted between the regular helmet filter lense and the rear cover plate of the lense holder, and give comfortable close-up vision at any working angle. They permit full use of the helmet window, and are also a useful aid to all welders by providing magnification on precision jobs, or where welding must be performed at arm's length. They are made in four powers, to meet the needs of most bifocal wearers in industry. Made by **Bausch & Lomb Optical Co.,** 727 St. Paul St., Rochester 2, N. Y.

For more details circle NED-966 K3 on enclosed inquiry slip

FOLEY FILED SAWS Pay big dividends . . . . . HERE!

Only the best saw sharpening can give you top-speed production. The Foley Saw Filer quickly puts old saws with dull and irregular teeth back in perfect condition—and keeps them perfect! 25% to 40% increase in production is frequently realized with Foley-filed saws.

ONE machine files crosscut circular saws, band saws, hand saws.

30 DAY TRIAL OFFER permits you to use a Foley Saw Filer in your own shop. You can't lose on this offer—write or send coupon.

FOLEY Automatic SAW FILER

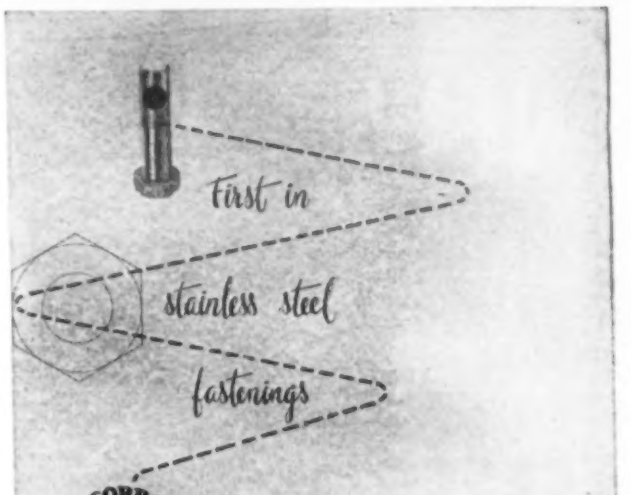
FOLEY MFG. CO. 3323 N.E. Fifth St., Minneapolis 18, Minnesota

Please send literature, and details of your 30-DAY TRIAL OFFER.

Name .....

Address .....

For more details circle NED-967 K3 on enclosed inquiry slip



ANTI-CORROSIVE METAL PRODUCTS

behind this symbol is an on-hand inventory of *more than 9,000 items and sizes* of stainless steel fastenings. Ready for immediate shipment, this stock is the largest and most complete in the industry. In addition, a production capacity for large or small quantities of special orders is at your service! A good reason—when you think of stainless steel fastenings—to think FIRST of Anti-Corrosive! *Send for Catalog 53T today!*

ANTI-CORROSIVE METAL PRODUCTS CO., INC.
Castleton-on-Hudson, New York

For more details circle NED-968 K3 on enclosed inquiry slip

BRAZING?

B&W Bulletin gives pointers on simplified design of parts made by brazing tubular products.

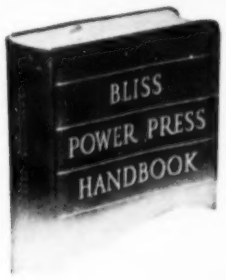
Write for Bulletin TB 349

TA-1774 (LM)

THE BABCOCK & WILCOX COMPANY
TUBULAR PRODUCTS DIVISION
Beaver Falls, Pa.—Seamless Tubing; Welded Stainless Steel Tubing
Alliance, Ohio—Welded Carbon Steel Tubing

For more details circle NED-969 K3 on enclosed inquiry slip

Bought your copy yet?



• 700 Pages
• 450 Illustrations

"One or Several Are Needed in Every Stamping Shop . . . *American Machinist*"

Sections on: Computing press jobs • Selecting proper press • Useful engineering tables • Die illustrations • Complete glossary • Plus a service section for Bliss presses. **$7.50**

E. W. BLISS CO.
(Handbook Department)
1401 Raff Road S. W. Canton, Ohio

Rush me a copy of the Bliss Power Press Handbook.

I am enclosing $7.50 _____ • Bill me _____

For more details circle NED-970 K3 on enclosed inquiry slip

CESCO safety equipment

Shows newest styles and designs of:

Aprons, Helmets, Hoods, Shields, Goggles, Lenses, Sleeves, Guards, Respirators, Spectacles

GET YOUR FREE COPY

See your CESCO Safety Equipment distributor or write us today.

CHICAGO EYE SHIELD COMPANY • 2322 Warren Blvd. • Chicago 12, Ill.

CESCO FOR SAFETY

OFFICES IN: Atlanta, Birmingham, Boston, Buffalo, Cincinnati, Cleveland, Columbus, Detroit, East Orange, Houston, Indianapolis, Kansas City, Knoxville, Little Rock, Los Angeles, Mexico City, D. F., Milwaukee, Montreal, Peoria, Philadelphia, Pittsburgh, Salt Lake City, San Francisco, Spokane, St. Louis, St. Paul, Toledo, Tulsa

For more details circle NED-971 K3 on enclosed inquiry slip

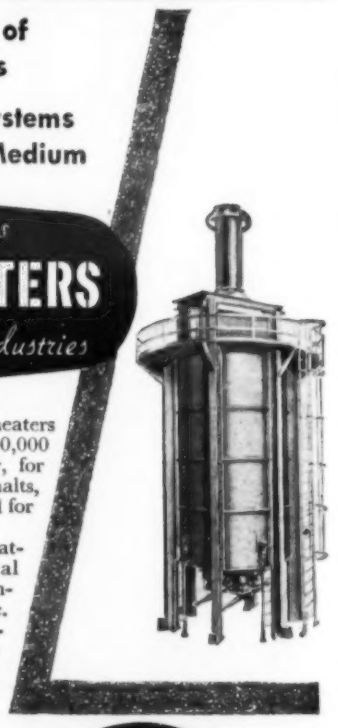
★ For Direct Heating of Liquids and Vapors

★ Indirect Heating Systems Using Circulating Medium

Struthers Wells

FIRED HEATERS

for the Process Industries



Struthers Wells direct fired heaters are available in sizes from 100,000 to 25,000,000 BTU per hour, for heating gasoline, oils or asphalts, superheating steam or gas, and for indirect heating systems.

Struthers Wells indirect heating systems give economical—trouble-free operation at temperatures to 750° F., or above.

If your process requires temperatures above those of existing steam supply—if steam is not available, or if the process can be improved by higher temperatures, investigate this simple and economical equipment.

Struthers Wells

STRUTHERS WELLS CORPORATION

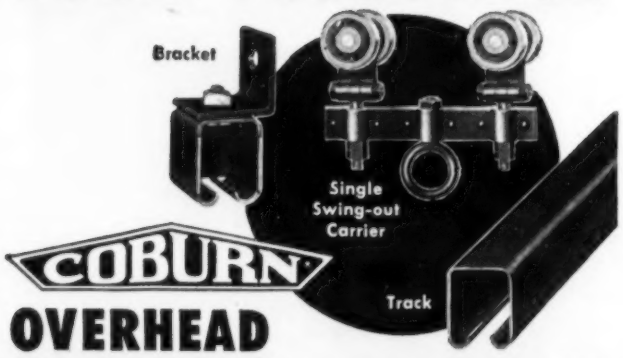
Warren, Pa.

PLANTS AT WARREN, PA. • TITUSVILLE, PA.

Offices in Principal Cities

For more details circle NED-972 K3 on enclosed inquiry slip

BOOST PRODUCTION



COBURN

OVERHEAD CONVEYING EQUIPMENT

Meet today's need for maximum plant production, increased efficiency and faster handling of materials with Coburn Overhead Conveying Equipment. It gives you unobstructed floor space, requires very little headroom, makes it easy to spot work directly over machines. Loads up to 3000 lbs. handled by hand chain or electric hoist; power-operated equipment also available.

For additional information write to Sales and Engineering, 56 Sterling St., Clinton, Mass., or consult your classified telephone directory. Write today for catalog #220.

EAST: Wickwire Spencer Steel Division, Clinton, Mass.
WEST: The Colorado Fuel and Iron Corporation, Denver, Colorado
PACIFIC COAST: Pacific Coast Division, Oakland, California

COBURN PRODUCTS

PRODUCT OF WICKWIRE SPENCER STEEL DIVISION THE COLORADO FUEL AND IRON CORPORATION CF&I

For more details circle NED-973 K3 on enclosed inquiry slip

New Literature & Catalogs

Carbon & Graphite Products

Stackpole Carbon Co.—Designed as a guide to the many uses of carbon and graphite, catalog 40A presents useful comparative properties data. It also shows applications in products ranging from battery and welding carbons to tube anodes, electrical contacts, bearing materials, seal rings and rail bonding molds. Use for spectrographic analysis is also described.

For more details circle NED-974 K3 on enclosed inquiry slip

Locknuts

Security Locknut Corp.—8-page bulletin describes and illustrates "The Locknut You Can't Shake Loose." Product is available in a wide range of standard and special forms in many sizes, all of which bulletin illustrates and tabulates. Locking action derives from an elliptical threaded insert permanently pressed into the body of the nut.

For more details circle NED-975 K3 on enclosed inquiry slip

Nickel in Railroad Equipment

International Nickel Co.—Well-illustrated 36-page booklet shows many interesting uses of nickel and nickel alloys in railroad equipment. Illustrations show various alloys in use in the fabrication of Budd observation cars, freight car bodies, diesel, diesel-electric and steam locomotive engines and bodies and many other applications. Each is analyzed, and the "reason why nickel" explained.

For more details circle NED-976 K3 on enclosed inquiry slip

Electronic Control Cuts Costs

Photoswitch Inc.—Forty-six case studies in the book "Cutting Production Costs with Electronic Controls" explain factually how standard electronic controls have solved problems of weighing, counting, measuring, timing and cycling. Their use brings about new efficiency in all types of industrial applications.

For more details circle NED-977 K3 on enclosed inquiry slip

Hinges of Many Types

Stanley Works—Illustrations, mechanical details and application of hinges for practically every door-hanging purpose are found in 20-page bulletin 17e/St. AIA file No. 27B. Selector guide uses diagrams to show installation principle. Data are given on finishes, metals and features.

For more details circle NED-978 K3 on enclosed inquiry slip

Developments in Welding

Eutectic Welding Alloys Corp.—Eighteen new welding developments are presented in 8-page illustrated booklet TIS 1621. Organic bonding developments are prominently featured, together with various other materials for use in maintenance as well as production welding at various application heats.

For more details circle NED-979 K3 on enclosed inquiry slip

Aluminum Insulated Cables

Okonite Co.—16-page illustrated booklet OK-1070 contains a wealth of technical data on insulated aluminum power cables. It reviews properties, problems and advantages of the cables, and includes resistance ratios, current carrying capacity conversion factors and size comparisons for equal voltage drops. Test results of various fittings are also shown.

For more details circle NED-980 K3 on enclosed inquiry slip

Miniature Remote Indicator

Fischer & Porter Co.—Well-illustrated 12-page bulletin No. 55-10 introduces a pneumatically operated remote miniature indicator for the process industries. Instrument, while being compact, has a rotary scale design which gives an effective scale length of 5¾ in. A variety of either audible or visual warning devices can be used to monitor the variable. Bulletin not only completely describes instrument, but gives procedure for setting up a control transfer station.

For more details circle NED-981 K3 on enclosed inquiry slip

Sheet Coating & Gluing Machines

Potdevin Machine Co.—For production sheet coating and gluing, Potdevin machines in various styles are described in illustrated catalog SG-1152. Coatings can include such materials as latex, paint, varnish, glue and resin. Standard machines handle materials up to ⅛-in. thick, while attachments are available that permit the coating of rigid materials to ⅜-in. Standard machines will accommodate sheet up to 45 in. wide.

For more details circle NED-982 K3 on enclosed inquiry slip

NEW! FAST! EASY!

PRINT FACSIMILE LABELS DIRECT TO CONTAINERS

Here's the new system that eliminates labels and the old stencil board—ink brush method of addressing and marking shipping containers. With the new Web-O-Print JC-3 hand printer and a Kustom-Kut (die-cut) stencil, you can print both facsimile label and shipping information direct to cartons or boxes *in one operation* . . . at the rate of 40 to 50 cases per minute!

Kustom-Kut stencils are pre-cut to print your label or form. Address and other variable information are typed in . . . stencil is quickly attached to Web-O-Print . . . label and address are then printed on container in a single movement.

Web-O-Printing is a fast, clean one-hand operation. Prints on rough and cylindrical surfaces. Leaves a sharp, compact, fade-proof and waterproof print. Can be easily blocked out for re-shipping.

FREE SAMPLE PRINT Write today for a sample print and information on trial offer. No obligation.

Weber

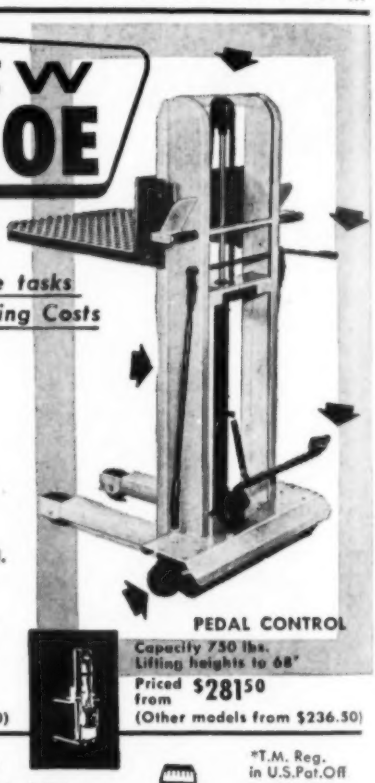
LABEL AND MARKING SYSTEMS
Division of Weber Addressing Machine Co.
Dept. NE-3, Mount Prospect, Ill.

For more details circle NED-983 K3 on enclosed inquiry slip

the NEW *BIG JOE

HYDRAULIC LIFTS

Master many more tasks to Trim Your Handling Costs



- Stronger frame.
- Quickly adjustable forks or platform.
- Straddle-type base.
- Rear swivel casters.
- Hand safety brakes.
- Pedal or battery operated.
- Optional remote control.

Other New Features

BATTERY OPERATED
Capacity 1000 lbs.
Lifting heights to 80"
Priced from $672.50
(other models from $587.50)

PEDAL CONTROL
Capacity 750 lbs.
Lifting heights to 68"
Priced from $281.50
(Other models from $236.50)

Over 30 Models
Ask for Demonstration

*T.M. Reg. in U.S. Pat. Off.

Distributors in Principal Cities

BIG JOE MANUFACTURING COMPANY
908 W. Jackson Blvd. • Chicago 7, Ill.
Cable Address: Big Joe

Let BIG JOE do it!

For more details circle NED-984 K3 on enclosed inquiry slip

Aerovent FAN

EXTENDED SHAFT FAN

KEEPS MOTORS OUT OF AIR STREAM

Extended shaft may be water jacketed, if desired. Sizes 12" to 84". 2, 4 or 6 Blades.

For industrial applications where it is desired to keep the motor out of the air stream to meet Underwriter's specifications for exhausting explosive vapors. It protects the motor from high temperature air, corrosive fumes, or combination of obnoxious fumes and moisture.

Certified Ratings — Air Deliveries are in accordance with Standard Test Code for Centrifugal and Axial Fans — PFMA

Other Models

Direct Connected, Man Cooling, Duct Type, Belt Driven, Pulley Driven. Sizes 12" to 144".

Write today for

ENGINEERING BULLETIN

AEROVENT FAN CO., INC.

ASH and BROWN STREETS, PIQUA, OHIO

Competent Sales Engineers in Principal Cities

For more details circle NED-985 K3 on enclosed inquiry slip

use Hanna Valves for exacting CONTROL

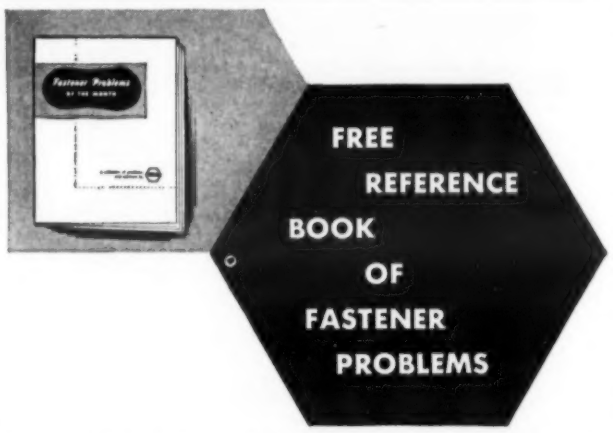
Hydraulic and pneumatic cylinder performance is dependent on the efficiency of the control valves used. That's why it pays to use Valves made by a leader in cylinder manufacture. For more than fifty years, the Hanna name has been synonymous with quality. With Hanna Valves, you have a selection to meet every cylinder operating need, plus the advantages of Hanna engineering services. Get your local Hanna Representative's name from your classified telephone directory or write for complete Valve data.

Hanna Engineering Works

HYDRAULIC AND PNEUMATIC EQUIPMENT ... CYLINDERS ... VALVES ... RIVETERS

1759 ELSTON AVENUE • CHICAGO 22, ILLINOIS

For more details circle NED-986 K3 on enclosed inquiry slip



Here's an interesting and varied collection of fastener problems, which were solved by sound application of self-locking ELASTIC STOP nuts or the new Rollpin fastener. Some of these 28 cases may suggest answers to some design problems of yours. Or perhaps you'll just enjoy reading how other engineers resolved their difficulties.

Write for your free copy of this booklet of ideas. And if you have ideas or problems of your own, remember that ESNA has the broadest line of standard and special self-locking fasteners . . . and a staff of experienced engineers ready to help you. Address Dept. N39–1037.

ESNA

ELASTIC STOP NUT CORPORATION OF AMERICA

2330 Vauxhall Road, Union, N. J.

DESIGN HEADQUARTERS FOR SELF-LOCKING FASTENERS

For more details circle NED-987 K3 on enclosed inquiry slip

NATIONAL METAL EXPOSITION Oct. 19th . 23rd Cleveland, Ohio Booth No. 2334

The P. D. Q. (Portage Double Quick) tool holder and adapter line opens a new era in quick change tools. These Portage tools not only mean new speeds in production and set-up time, but increased accuracy as well.

Send for the New P. D. Q. Catalog

PDQ **PORTAGE Double-Quick TOOL CO.**

1043 Sweitzer Avenue • Akron 11, Ohio

For more details circle NED-988 K3 on enclosed inquiry slip

New Processes & Materials

INDUSTRIAL MATTING tailored to fit around machines

With an insulating and cushioning rubber foot that also prevents slippage, Springboard Triple Cushion floor mats can be tailored to fit around machines, tools and counters. Boards are of straight grained seasoned oak, assembled with a nonrusting steel cable nail-less construction. Matting rolls for easy handling and cleaning. Made by **Southern Mfg. Co.**, Dept. ED, 1814 DeSiard St., Monroe, La.

For more details circle NED-989 K3 on enclosed inquiry slip

ADHESIVE FOR TEFLON direct pull strength is about 15 psi

For binding Teflon to Teflon, or Teflon to metal and other materials, Flexrock No. 80 pressure-sensitive adhesive has a peel strength of over 1000 grams per in. or a direct pull strength of between 12 and 15 psi. Possessing good electrical properties and also resistance to alkalies and acids, it can be applied by brushing, dipping or spraying. Drying is necessary before the parts are pressed together. Air drying is satisfactory, but drying under heat is faster, taking as little as 5 minutes, and results in greater adhesive strength. Small quantities of the adhesive are available for test purposes at $3.50 per pound from **Flexrock Co.**, Packing Div., 3603 Filbert St., Philadelphia 4, Pa.

For more details circle NED-990 K3 on enclosed inquiry slip

PARTS STAMPING METHOD produces precision die-cut parts

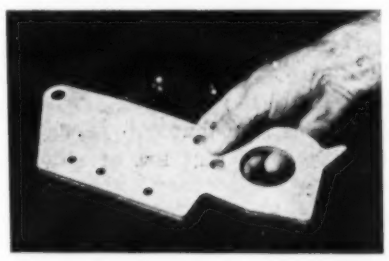
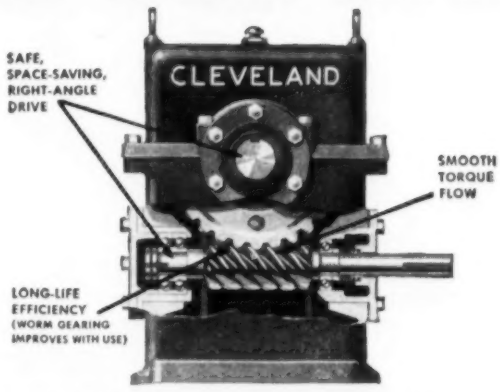


Photo shows die-cut part produced by method which allows size and relative location of pierced holes to be held to tolerance of plus-minus 0.001-in. Process lends itself to die-producing of all sheet materials that can be stamped, such as all sheet and alloy steel, nonferrous sheet materials, fiber, Bakelite and other sheet stock. Practically any material from 0.001 to ⅜-in. thick can be blanked and pierced to desired shape and size. Service offered by **Dayton Rogers Mfg. Co.**, 2822 Thirteenth Ave. S., Minneapolis 7, Minn.

For more details circle NED-991 K3 on enclosed inquiry slip

HERE'S A WORM GEAR DRIVE THAT IMPROVES WITH USE



EFFICIENCY in a Cleveland is high because bronze gear and nickel steel worm meet exact specifications precisely. Sliding action of worm on gear transmits power smoothly, quietly, with up to 50% increased resistance to shock and wear. Run in at the factory, a Cleveland drive actually improves with use. Right-angle design saves space.

Learn other Cleveland benefits! Write for Catalog 400. The Cleveland Worm & Gear Company, 3283 East 80th Street, Cleveland 4, Ohio.

THE CLEVELAND WORM & GEAR COMPANY

Speed Reducers

Affiliate: The Farval Corporation, Centralized Systems of Lubrication

For more details circle NED-992 K3 on enclosed inquiry slip

International Carton Stapling Machine cuts costs $28,000 a year

Harrison Steel Cabinet Co., Chicago manufacturer of kitchen wall, sink, and base cabinets saves $28,000 a year with an International Retractable Anvil Carton Stapling Machine.

Formerly, the company packaged 300 units in 8 hours, using 13 men to set up and seal the corrugated cartons. Now, with only 6 men . . . one operating the stapler, the rest packing . . . Harrison closes 600 cartons in 8 hours.

International Carton Stapling Machines will save you as much as 50% on shipping costs . . . write for details.

INTERNATIONAL STAPLING MACHINES

INTERNATIONAL STAPLE & MACHINE COMPANY
800 East Herrin Street, Herrin, Illinois

For more details circle NED-993 K3 on enclosed inquiry slip

Nothing You Build Into Your Product *Can Count for More!*

Everyone Can Count on VEEDER ROOT

This compact Reset Counter is a standard built-in part of many makes of business machines, cameras, coin machines, compressors, die casting machines, hay balers, laundry equipment, plastic molding machines, punch presses, shoe machines . . . and what have *you?* It counts turns, strokes, pieces or other units of performance and output . . . supplying facts-in-figures that help toward closer *Count*rol. Find out how *your* product can give your customers a *new usefulness*, with these or other Veeder-Root Counters for mechanical or electrical operation. Write:

VEEDER-ROOT INCORPORATED

HARTFORD 2, CONNECTICUT

Chicago 6, Ill. • New York 19, N. Y. • Greenville, S. C.
Montreal 2, Canada • Dundee, Scotland
Offices and Agents in Principal Cities

"The Name that Counts"

For more details circle NED-994 K3 on enclosed inquiry slip

Low Micro-Inch Finishes in Automatic Profiling of Difficult Cam Shapes with GORTON CM-12 Contour Mill

This tracer-controlled, vertical-head mill, with two power-driven rotary tables, rapidly produces complicated external or internal cam shapes and continuous grooves or slots of irregular radii. The 16-inch master-copy table holds larger master cams, and spindle speeds range from 300 to 10,000 rpm. Your shop people can stack and profile several thin cams at a time and, through the reduction ratio principle, hold closer tolerances in the piece parts than in the master.

Write for Bulletin 2380-C-1910 and complete details on how to adapt the CM-12 to your application.

GEORGE GORTON MACHINE CO.
1910 RACINE STREET • RACINE, WISCONSIN, U.S.A.

For more details circle **NED-995 K3** on enclosed inquiry slip

You demanded it!
benchmaster
built it!

This moderately-priced punch press now gives you the *extra* tonnage capacity to easily handle jobs overloading your smaller presses. Massive, heavy-duty construction throughout, plus proven features that have made Benchmasters the world's favorite low-tonnage presses!

See the complete Benchmaster line today! Now available in 51 models! Literature available! Benchmaster Manufacturing Company, 1835 W. Rosecrans Ave., Gardena, California.

Also available:
BACK GEARED to provide the slow, powerful strokes for blanking, forming and deep drawing operations.
HALF-PRESS where unlimited shut height is needed!

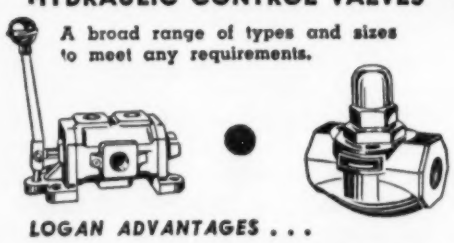
benchmaster
World's largest manufacturer of small punch presses and mills.

For more details circle **NED-996 K3** on enclosed inquiry slip

LOGAN AIR AND HYDRAULIC **POWER**
SPEEDS • COORDINATES • REFINES PRODUCTION
IN OVER 10,000 INDUSTRIAL PLANTS

AIR-DRAULIC CYLINDERS • AIR and HYDRAULIC PRESSES • COLLET GRIP TUBE FITTINGS • SUPER-FLOW COOLANT PUMPS • HYDRAULIC POWER UNITS • HYDRAULIC CYLINDERS • HYDRAULIC CONTROL VALVES • AIR CHUCKS • AIR CONTROL VALVES • AIR CYLINDERS

Logan
HYDRAULIC CONTROL VALVES
A broad range of types and sizes to meet any requirements.



LOGAN ADVANTAGES . . .
- Ease of Installation
- Effortless Operation
- Long-Life Construction
- Unrestricted Porting
- Easy to Service
- Infrequent Maintenance

SAVES TIME Logan AIR AND HYDRAULIC EQUIPMENT EXPORT-MOTOR

LOGAN MANUFACTURES 6,975 STANDARD CATALOGED ITEMS • CATALOG ON REQUEST
Let Logan Engineers help you design your Air and Hydraulic Circuits.

LOGANSPORT MACHINE CO., INC.
808 Center Avenue Logansport, Indiana

For more details circle **NED-997 K3** on enclosed inquiry slip

New Literature & Catalogs

A Company and Its Product

D. W. Onan & Sons Inc.—More than 120 photos tell the story of Onan products, what they are and how they are manufactured in 40-page institutional brochure "Measurement Factors of a Company and Its Products." Production facilities and methods, employee-management relationship, dealer and service outlets, and applications for the various electric generating plants made are phases covered.

For more details circle **NED-998 K3** on enclosed inquiry slip

Liquid Filters

Cuno Engineering Corp.—12-page illustrated bulletin MK-0553 describes a complete line of Micro-Klean filters for liquid applications. Standard models are for flows between 1.8 and 900 gpm at maximum operating pressures from 125 to 1000 psi. Applications, standard dimensions, case histories and selection data are included, together with hydraulic data covering viscosity conversion tables, hydraulic formulas and representative micronic comparisons.

For more details circle **NED-999 K3** on enclosed inquiry slip

Portable Electric Tools

Porter-Cable Machine Co.—28-page catalog No. 101 lists 52 portable electric tools and kits with more than 400 attachments. Included are complete specifications and prices for electric saws, sanders, grinders, drills, planers, routers, shapers, radial arms, blades, abrasive wheels and discs.

For more details circle **NED-1000 K3** on enclosed inquiry slip

Aluminum Gravity Conveyor

Speedways Conveyors, Inc.—Complete with photos and detailed specifications, bulletin describes aluminum conveyor capable of moving 850 lb of live load per 10 lineal feet. Because of lightness in weight, sections of this conveyor can be easily lifted to overhead storage racks when not in use.

For more details circle **NED-1001 K3** on enclosed inquiry slip

Blind Rivets

Townsend Co.—Cherry blind rivets which can be installed by one man from one side of work and are comparable to conventional rivets in strength and installation speed are described in 12-page catalog. Information on applications, mechanical specifications, types, data on rivet guns and list of stocked rivets available are included.

For more details circle **NED-1002 K3** on enclosed inquiry slip

Electronic Tubes

Amperex Electronic Corp.—Compiled for engineers seeking the proper electronic tubes to suit their applications, 20-page condensed catalog will also serve as a quick reference guide and source of supply for initial equipment as well as for replacement purposes. Tabulated data cover communication, industrial, rectification, radiation detection, electromedical, amateur and special purpose tubes.

For more details circle **NED-1003 K3** on enclosed inquiry slip

Manually-Operated Indicators

Leeds & Northrup Co.—How manually-operated portable and panel indicators are being used to measure temperature, electrolytic conductivity or pH is explained in 24-page catalog ND42. Indicators are direct reading in terms of the variable under measurement. Feature of catalog is arrangement of instruments according to application. Circuit diagrams show how they operate.

For more details circle **NED-1004 K3** on enclosed inquiry slip

Materials Handling

Towmotor Corp.—"Mr. Smith to See You, Sir!" is title of 12-page salesman-type presentation which tells about new developments at Towmotor, services to customers, and ways managements can utilize the developments to cut costs, speed up production, and increase profits.

For more details circle **NED-1005 K3** on enclosed inquiry slip

Speed Measuring by Resonance

James G. Biddle Co.—Dealing with measurement of speed by resonance or vibration, 14-page bulletin 31-P8 tells how series of tuned steel reeds can indicate speeds more accurately than most mechanical tachometers and speed indicators. Resonant reed hand tachometers feature no moving parts and cannot be oversped or easily damaged. They will operate continuously for years without loss of accuracy.

For more details circle **NED-1006 K3** on enclosed inquiry slip

Another **LEMPCO** LABOR-SAVER

You Need this . . .
LOW-COST LABOR SAVER!

Quick and simple to operate, the LEMPCO MOBILCRANE is the answer to your "Intra-Plant" material handling problems.

Hydraulic pump mechanism lifts and carries loads up to 2 tons through narrow isles and doorways or around sharp turns.

One man operation.

WRITE TODAY for full information

LEMPCO PRODUCTS, Inc.
INDUSTRIAL DIVISION
BEDFORD, OHIO

LEMPCO MOBILCRANES
for 35 years . . . a leading builder of machine tools

For more details circle **NED-1007 K3** on enclosed inquiry slip

Send for this *Free* SAMPLE FOLDER...

Contains 25 different test samples of high-dielectric Insulating Tubing & Sleeving.

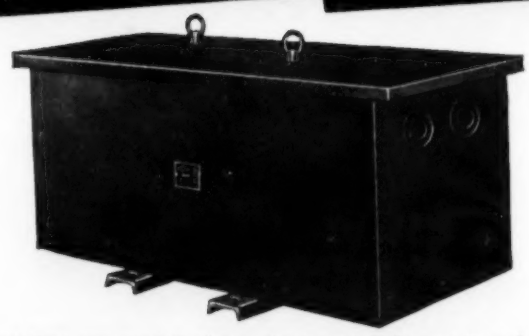
Includes samples and descriptions of: Varglas Silicone • Permafil-Impregnated Varglas Tubing • Varglas Tubing and Sleeving • Varglas Non-Fray Sleeving • Varflo Tubing and Sleeving • Varflex Cotton Tubing and Sleeving • Syntholvar Extruded Tubing

Write today!

VARFLEX CORPORATION
310 Jay St. Rome, N.Y.

For more details circle **NED-1008 K3** on enclosed inquiry slip

3 PHASE TRANSFORMERS 3 KVA THRU 750 KVA



Next time you need 3 phase, dry type transformers in a hurry, check the performance data, practical mechanical features, as well as the price of Acme Electric dry type transformers. Stock sizes from 3 thru 750 KVA, all standard primary voltages up to and including 5 Kv. There's a Service Dealer with stock on hand — as close as your telephone.

ACME ELECTRIC CORPORATION
MAIN PLANT: 3010 WATER STREET • CUBA, N. Y.
West Coast Engineering Laboratories: 1375 W. Jefferson Blvd. • Los Angeles, Cal.
In Canada: ACME ELECTRIC CORP. LTD., 50 North Line Road • Toronto, Ont.

Acme ACME Electric
TRANSFORMERS

For more details circle **NED-1009 K3** on enclosed inquiry slip

Tough Babies!

THEY DEFY ROUGH HANDLING!

LOWER COST Material Handling favors these rugged items! Mill-box above features steel compound Top rail (see inset) and Bulge corners, both extraordinary wear-resisting. Note slat reinforcing and non-jamming "nesting limits"

BOTH BUILT BY "BAL" BUILT WITH A CONSCIENCE FOR MATERIAL HANDLING

Nesting tote boxes at right, also built with handles and strongly reinforced all-fibre; hard, vulcanized for severe usage.

ALSO HARD VULCANIZED FIBRE TRUCKS, DRUMS, SPECIAL CASES.

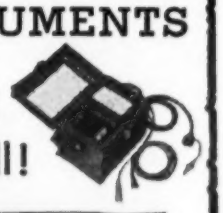
• *Write for Catalog!*

WILLIAM BAL CORPORATION
11 Johnson St, Newark 5, N. J.

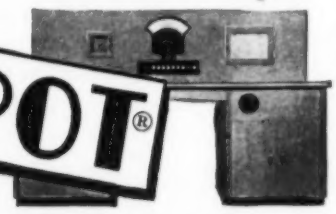
For more details circle NED-1010 K3 on enclosed inquiry slip

DIELECTRIC STRENGTH TESTING INSTRUMENTS

...from a handful
...to a shop full!



HYPOT®



You name it... ARI either has it, or can build it for you promptly from sound design and long experience with virtually every known type of high potential dielectric strength testing instrument.

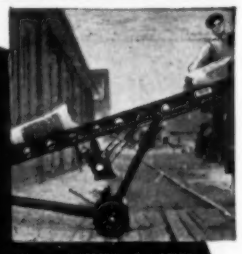
Standard "Hypot" Juniors range from 0-1500 volts to 0-6000 volts. Large mobile Hypots available to 50,000 volts, 5 KVA. **Write for data today!**

ASSOCIATED RESEARCH, Incorporated
"Precision Instruments Since 1936"

3786 WEST BELMONT AVENUE • CHICAGO 18, ILLINOIS

For more details circle NED-1011 K3 on enclosed inquiry slip

This 2 IN 1 CONVEYOR can cut equipment costs in half



TOTE-ALL handles BOTH bulk and packaged materials

FOR many firms a Lake Shore Tote-All eliminates the need for a second conveyor—for others a Tote-All is real handy to have around, because in ten minutes, or less, this sturdy, portable unit converts into either a bulk or package conveyor—simply by adding or removing sideboards and hopper. Here's unbeatable flexibility for yard or warehouse. Coal by the ton—cola by the case, move it all with a Tote-All. Write Lake Shore for details.

LAKE SHORE Engineering Company 115
IRON MOUNTAIN, MICHIGAN
Dealers in all principal cities

For more details circle NED-1012 K3 on enclosed inquiry slip

New Processes & Materials

PLASTIC WINDOW COATING
reduces sun's heat, glare and rays

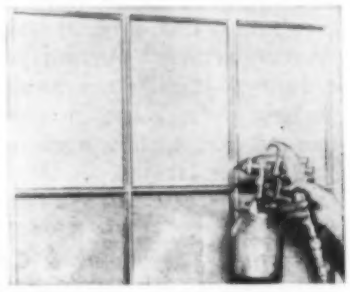


Illustration shows how Thermoglare plastic film is sprayed on windows to provide protection against solar heat, glare and ultraviolet rays. This product is a thermoplastic, and tests show that it filters out up to 95 per cent of ultraviolet and 80 per cent of infrared rays. The compound is also available in sheet, which has similar properties and can be used in place of window glass. Both products are translucent, and are available in blue-green, light gray and frosty white. They are also weather-resistant, and will maintain efficiency over a period of years. Made by **Eastern Industrial Service,** 17 Day St., Cambridge 40, Mass.

For more details circle NED-1013 K3 on enclosed inquiry slip

PROTECTIVE COATING
for iron, steel, aluminum

Six basic formulations of Zincilate (*NED, April* '48), a protective coating for application to various iron, steel and aluminum products and structures, are available for protection against corrosion and abrasion. Maximum protection is provided by one coat which also increases service life and improves product appearance. Application can be by spray, brush, dip or flow-coat methods. Made by **Industrial Metal Protectives, Inc.,** 402 Homestead Ave., Dayton 8, O.

For more details circle NED-1014 K3 on enclosed inquiry slip

CONVEYOR CHAIN
utilizes ball and socket principle

Minimum friction losses and good flexibility result from the application of the ball and socket principle to the Star 400 line of heavy industrial conveyor chain, which will make close spiral turns and bend vertically on a 12-in. radius. Lugs on the main links stabilize the position of the trolley, preventing wedging or binding on small vertical bends. Chain is drop forged, line tests demonstrating that it will pull over 60,000 lb ultimate load. It is easily assembled or disassembled without tools, and is interchangeable with standard 458 Keystone chain. Made by **Arcturus Mfg. Corp.,** 4301 Lincoln Blvd., Venice, Calif.

For more details circle NED-1015 K3 on enclosed inquiry slip

GRC ZINC ALLOY FASTENINGS

GRC WING NUTS
Exclusive, finger-grip design; easy to assemble, disassemble; brightly finished; clean threads.

GRC CAP NUTS
Die cast, not turned! Free of tool marks and cut-off burrs; class 2 threads tapped square with face of nut.

GRC Small TUBULAR RIVETS
Die cast, not headed! Closer tolerances, more uniform heads for greater riveting efficiency. Diameter up to 9/64"; length to 5/16".

NEW!
GRC WING SCREWS
A steel screw combined with GRC's attractive finger-grip wing-nut

• DURABLE
• DEPENDABLE
• RUSTPROOF

Gries die cast zinc alloy fastenings are durable, rustproof . . . economical, too! All Gries fastenings may be used without protective finishes in most applications. Furnished in all commercial finishes when desired. Prompt delivery on standard sizes — specials to order. *Write Today for Samples and Prices.*

GRIES REPRODUCER CORP.
Manufacturers of Small Castings Exclusively
143 Beechwood Ave., New Rochelle, N.Y. • NEw Rochelle 3-8600

For more details circle NED-1016 K3 on enclosed inquiry slip

No Shut-Down For Filter Cleaning!

Cuno's exclusive "comb-clean" action provides complete cleaning of the strainer element on the job—*without stopping fluid flow.*

Just an occasional rotation of the handle does the cleaning. The strainer element turns through the cleaner blades, combing all dirt from the strainer surfaces. Dirt particles fall to bottom of housing, where they can be drained off periodically.

As for application, remember, if you can pump it, Cuno can filter it. Write for more facts about the modern AUTO-KLEAN strainer. Cuno Engineering Corp., Dept. 7017A, Meriden, Connecticut. A.3.17

For more details circle NED-1017 K3 on enclosed inquiry slip

FOR *Complete* PLANT SAFETY...

ICE and SNOW Control with BAUGHMAN ICE CONTROL EQUIPMENT

• *for Loading Zones, Parking Areas, Sidewalks, Roadways*
• *for Spreading Salt, Sand, Chloride, Cinders*
• *A Model for Every Size Plant*

PULL TYPE SPREADER (Model SC-52). Powered by own traction. Improved distributor plate (only 13" above ground). Spreads in complete circle under truck wheels. Includes tow hitch for attaching to any truck. Write for Bulletin A-371.

CINDER CRACKER (Model 51-HDC). Fits any width dump body . . . hydraulic operation, controlled from truck cab . . . easily installed or removed without damage to truck . . . "quick-disconnect" hose couplings . . . spring-mounted roller crushes cinders, also spreads sand, rock to ½". Bulletin A-354.

SPREAD-MOBILE. "King of Spreaders." One-man operation, completely cab controlled. New hydraulic operation. Improved "Center-Spred" distributes under all four wheels for better traction, better visibility. Spreads up to 3300 lbs. per mile, from 1½-ft. to 40-ft. wide. Split-bottom dump for off-season uses. Exhaust heater to prevent load-freezing. Bulletin A-370-H.

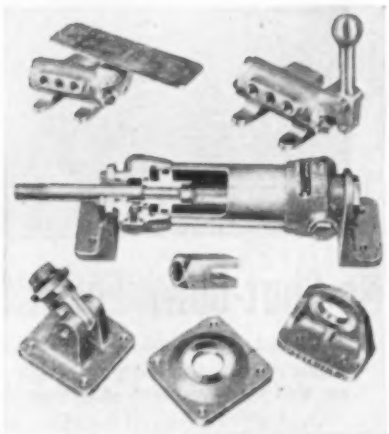
BAUGHMAN MANUFACTURING CO., Inc.
117 Arch St. • Jerseyville, Ill.

For more details circle NED-1018 K3 on enclosed inquiry slip

SEAL OF PROVEN PERFORMANCE

Modernair

AIR / FLUID POWER EQUIPMENT SPECIALISTS



VALVES – CHUCKS – CYLINDERS – SILENCERS – SOLENOIDS
HYDRAULIC PUMPS-COMPRESSORS-PILOTS-AIR CONTROLS
MACHINE FEEDS – CLAMP CYLINDERS – QUICK EXHAUSTS
WRITE FOR CATALOG
STOCKS IN PRINCIPAL CITIES

Modernair CORPORATION
400 PREDA STREET • SAN LEANDRO, CALIFORNIA

For more details circle NED-1019 K3 on enclosed inquiry slip

Full Protection for Industrial Electric Service

ALLIS-CHALMERS INDOOR OIL CIRCUIT BREAKERS

Type E-47 oil circuit breaker rated 4160 volts, 600 amp, 25,000 kva interrupting capacity.

A COMPLETE LINE of indoor oil circuit breakers for 2300 to 13,800-volt service, up to 500,000 kva interrupting capacity is offered by Allis-Chalmers. These circuit breakers combine simplicity of design with reliability of performance. Each breaker is thoroughly tested before shipment. You can choose from a variety of mountings and accessories for automatic or manual operation.

Get complete information on the breaker for your requirements from your nearest A-C sales office, or write Allis-Chalmers, Milwaukee 1, Wisconsin.

A-3630

ALLIS-CHALMERS

For more details circle NED-1020 K3 on enclosed inquiry slip

GOOD NEWS ABOUT WHEELS

NEWS! About how 44 centers and only 22 bearings give a choice of 144 sizes to 12" x 4".

NEWS! About American Steelite® light-weight champs—weighing up to 9 pounds less than ordinary wheels.

NEWS! About American Tread-Lock method—the tread is *Rolled On So It Won't Roll Off!*

NOW! Get all this NEWS in the NEW bulletin on American Industrial Wheels, from:

THE AMERICAN PULLEY COMPANY, Phila., Pa.

THE AMERICAN PULLEY COMPANY
4294 WISSAHICKON AVE., PHILA. 29, PA.
Gentlemen:
I want the NEWS about Wheels—rush me your new American Steelite® Wheel Bulletin.
Name_____
Firm Name_____
Address_____
City_____ Zone_____ State_____

For more details circle NED-1021 K3 on enclosed inquiry slip

New Literature & Catalogs

Auto Parking Systems

Charles W. Lerch & Associates—Problems, costs and solutions to adequate automobile parking facilities are considered in 12-page illustrated booklet "Auto Parking." Advantages and disadvantages of ramp type, semiautomatic and operatorless automatic parking garages are discussed from all angles. Cost factors, how various systems work and other related subjects are treated.

For more details circle NED-1022 K3 on enclosed inquiry slip

Electronic Equipment & Components

Newark Electric Co.—"The Complete Electronics Reference Book" could well describe 196-page illustrated catalog No. 56. Thousands of items for industrial and laboratory use are covered and prices given. Complete equipment, components, parts, tools and related electronic, radio and electrical goods are described.

For more details circle NED-1023 K3 on enclosed inquiry slip

Triplex Pumps

Ajax Iron Works—Construction and performance data on the new TP-4000 series vertical triplex pump for oil recovery and industrial service are given in 6-page illustrated folder 531. Available with 1⅛-in. to 2¾-in. diameter plungers for 5000 to 825 psi service, pumps have displacement capacities of 5.2 to 123.5 gpm and 100 to 400 rpm.

For more details circle NED-1024 K3 on enclosed inquiry slip

Austempering & Martempering Data

A. F. Holden Co.—The results of various austempering and martempering treatments on a wide variety of steels are given in tabular technical form in 10-page technical bulletin. Complete relevant data are provided for typical process aspects.

For more details circle NED-1025 K3 on enclosed inquiry slip

Beryllium Copper Products

Beryllium Corp. — 16-page bulletin "Applications Unlimited" shows how beryllium copper is being applied throughout the industrial and commercial fields, in such specific products as potentiometers, auto parts and kitchen sinks. More than 50 applications are individually analyzed, showing how the alloy's various properties are best utilized.

For more details circle NED-1026 K3 on enclosed inquiry slip

Miniature Ball Bearings

Miniature Precision Bearings, Inc.—Ball bearings ranging in size from 0.100 to 0.375-in. OD, including radial, angular pivot, pivot and thrust types are the subject of illustrated 20-page bulletin. They are available in a variety of materials, including standard chrome bearing steel, type 440 stainless and 25 beryllium. Complete specifications together with performance data are given.

For more details circle NED-1027 K3 on enclosed inquiry slip

Steel Shop Equipment

Industrial Bench & Equipment Mfg. Co.—Including steel benches, bench legs, welding benches, machine and work stands, tote boxes and various accessories, steel shop equipment is featured in 8-page illustrated catalog No. 653. Laminated wood top benches are also included, together with construction, size, style and other data.

For more details circle NED-1028 K3 on enclosed inquiry slip

Stainless Welding Fittings

Tri-Clover Machine Co.—Many new sizes, plus revised engineering and application data are included in 20-page catalog 753 on stainless welding fittings for light gage outside-diameter tubing. These Zephyrweld butt fittings are available in complete line of ells, tees, crosses, reducers, etc., and in sizes from ¾ through 24-in. OD and in 36-in. OD for use with light gage tubing.

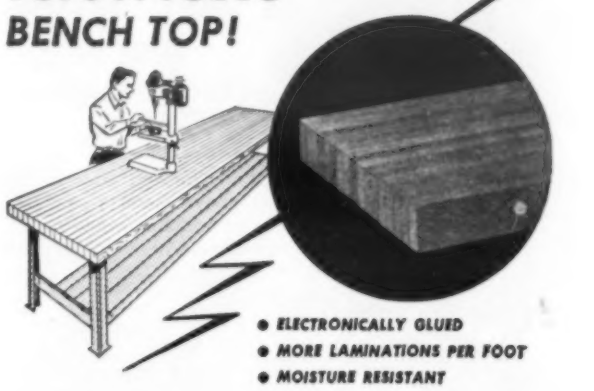
For more details circle NED-1029 K3 on enclosed inquiry slip

Variable Speed Fluid Drive

American Blower Corp.—Covering type VS, class 4 Gyrol fluid drive, 24-page bulletin 9319 is particularly valuable to engineers interested in obtaining adjustable speed operation in range from 100 to 2500 hp. Description encompasses operating principles, applications, company facilities, drive components, variable and constant torque charts, dimensions, auxiliaries and controls.

For more details circle NED-1030 K3 on enclosed inquiry slip

LAMINATED BENCH TOPS
• NOTHING—BUT NOTHING TOPS A TOLCO BENCH TOP!



• ELECTRONICALLY GLUED
• MORE LAMINATIONS PER FOOT
• MOISTURE RESISTANT

Tolco Northern Maple, laminated assembly bench tops are built by the originators of electronic gluing. Skilled craftsmen blend their talents with the finest quality lumber available to bring you the supreme product in the laminated bench and table top industry. Tolco tops have more laminations per board foot than any other giving them superior strength and resistance to wear and tear. Special processing makes Tolco tops especially resistant to moisture and warpage. Write today for full color catalog illustrating and describing this outstanding product. Prices on request.

THE TOLERTON COMPANY
P. O. Box D 658 Alliance, Ohio
Established 1894

For more details circle NED-1031 K3 on enclosed inquiry slip

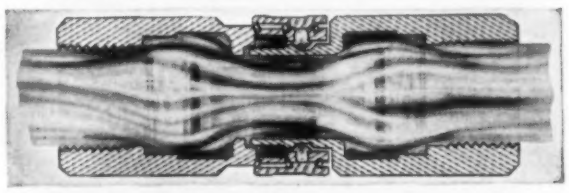
Announcing the NEW Snap-Tite's Hi-Flow LINE FULL SWIVEL

QUICK CONNECT and DISCONNECT COUPLERS

FOR AIR • WATER • OIL • GAS STEAM • CHEMICALS, Etc.

MADE IN SIZES
⅛" - ¼" - ⅜" - ½" - ¾" - 1" - 1¼" - 1½" 2" - 2½" - 3" - 4" - 6" - 8" - AND UP

MADE FROM
STEEL • BRASS • ALUMINUM and STAINLESS STEEL



The Greatest Flow in Couplers

Certain territories in the United States and foreign countries available for aggressive manufacturers representatives. Write for details.

SEND FOR NEW TECHNICAL CATALOG NO. VP83

SNAP-TITE INC.
201 TITUSVILLE RD. • UNION CITY, PA.

For more details circle NED-1032 K3 on enclosed inquiry slip

penco LOCKER LOCKS ITSELF!

UNIQUE PATENTED FEATURE!

Penco Steel Lockers are equipped with the finest automatic locking device—a feature that "forgives" forgetfulness, prevents thefts, permits authorized locker inspection without occupant's presence! Penco's 2-WAY ACTION gives choice of automatic or manual locking—a feature you'll want!

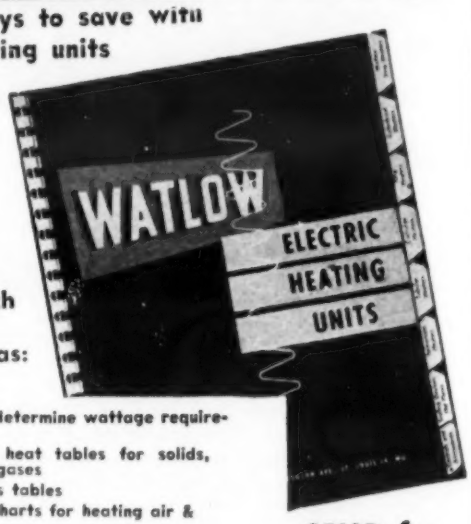
A Complete Line of Steel Lockers — Send for Catalog

PENN METAL Corporation of Penna. 85th YEAR OF SERVICE
82 OREGON AVE., PHILA. 48, PA.

▲ For more details circle NED-1033 K3 on enclosed inquiry slip ▲

This FREE BOOK will show you

dozen of ways to save with electric heating units



Contains such valuable information as:

- How to determine wattage requirements
- Specific heat tables for solids, liquids, gases
- Heat loss tables
- Energy charts for heating air & water

PLUS how to select and apply Watlow's complete line of Strip, Cylindrical, Rine, Cartridge, Tubular and Immersion Heaters to meet your particular needs.

SEND for Your Copy Today!

WATLOW Since 1922—Designers and Manufacturers of Electric Heating Units
ELECTRIC MFG. CO.
1374 FERGUSON AVE.
SAINT LOUIS 14, MO.

▲ For more details circle NED-1034 K3 on enclosed inquiry slip ▲

DRILL HOLES AS SMALL AS .030" IN ANY METAL OF ANY HARDNESS OR THICKNESS!

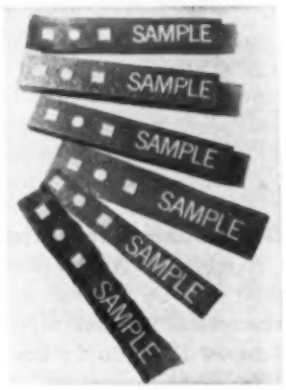
The M-300 Elox Electron Drill* combines the best in the 'arc machining' process. In addition to drilling holes as small as .030" it is adjustable for machine finishes ranging from *coarse, fine, extra fine and super fine* ...on any metals from magnesium to cemented carbide. The M-300 with exclusive Elox Automatic Feed allows for continuous operation with much of the human element removed. Using electrodes costing less than 3¢ per inch, with 'super fine' cutting, 1" of electrode will cut as much as 33" of hardened steel! Here indeed, is a dual-purpose machine that is being used for production machining of hardened steels and for removing broken drills in salvage. Write today for details and list of users.

ELOX CORPORATION OF MICHIGAN
738 N. ROCHESTER RD • CLAWSON, MICHIGAN

▲ For more details circle NED-1035 K3 on enclosed inquiry slip ▲

New Processes & Materials

SILVER INK for black and dark materials



Having good brightness and opacity, No. 3-P-0972 silver ink is designed to offer contrast in imprinting black and other dark materials. Among the products on which the ink has been successfully used are fiber containers, cartons, slab rubber, building siding, sponge rubber, plastic sheeting, rubber-impregnated and twill fabrics. Made by **Adolph Gottscho, Inc.**, 6C Terminal Rd., Hillside 5, N. J.

▲ For more details circle NED-1036 K3 on enclosed inquiry slip ▲

NEW-FLOOR SEALER prevents dusting and spalling

Applicable to newly-laid or repaired concrete floors, West concrete floor sealer acts as a protective coating to prevent dusting and spalling, yet it permits residual moisture to rise out of the new concrete. Single coat of this easily-applied finish is all that is required, and coverage is 400 to 600 sq ft per gal. New or freshly repaired floors can be opened to traffic faster than usual when sealer is used. Made by **West Disinfecting Co.**, Dept. DE, 42-16 West St., Long Island City 1, N. Y.

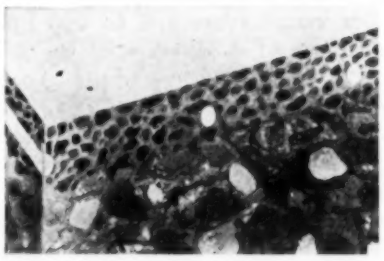
▲ For more details circle NED-1037 K3 on enclosed inquiry slip ▲

ALUMINUM PAINT for temperatures of 400° to 1000° F

Designed for use on metal surfaces at temperatures ranging from 400 to 1000° F, Thermalite outdoor aluminum paint will not discolor, flake or burn off and gives good protection against severe weather and the chemical fumes usually found where high heat is present. It is formulated with a high silicone content, and is designed to give correct coverage with one-coat application. Applications include exhausts, engines, boilers, ovens, steam lines, molds, locomotives and furnaces. Made by **Tropical Paint & Oil Co.**, 1150-1300 W. 70th St., Cleveland 2, O.

▲ For more details circle NED-1038 K3 on enclosed inquiry slip ▲

INDUSTRIAL FLOORING withstands high temperatures



Capable of withstanding thermal shock as well as temperatures up to 2000° F, industrial flooring employs aluminum rods embedded about 1 in. below the surface to conduct the heat away and dissipate it over a wide area. Flooring uses basic Dynapakt concrete consisting of hard selected and graded rock and sand combined with cements in a low-water ratio. Power compacting is used to obtain high density, and floor is ready to use after 24 hours. Developed by **Flash-Stone Co.**, 3727 Pulaski Ave., Philadelphia 40, Pa.

▲ For more details circle NED-1039 K3 on enclosed inquiry slip ▲

METAL PHOSPHATIZING CHEMICALS lend corrosion-resistant qualities

Line of now-available chemical specialties for phosphatizing metals for corrosion resistance and paint bonding is trade-named Fosbond. Chemicals apply stable, controllable and chemically bonded crystalline surface to metals which for cold working provides bond which holds lubricant under the most severe press pressures. In the paint bonding field, chemicals provide strong bond for organic finishes applied to metal, as well as a protective coating against corrosion under the finish. Fosbond line includes complete range of compounds for application of various type iron, zinc or manganese phosphate coatings. Developed by **Pennsylvania Salt Mfg. Co.**, 932 Widener Bldg., Philadelphia 7, Pa.

▲ For more details circle NED-1040 K3 on enclosed inquiry slip ▲

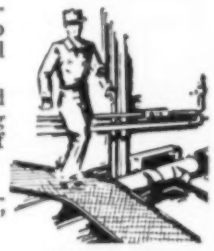
SOLVE ALL YOUR SKIDDING & SLIPPING PROBLEMS

with **Bustin** FIRM-GRIP SAFETY GRATING

Bustin FIRM-GRIP* grating guarantees safe, comfortable walking under the most adverse conditions where grease, oil or water can cause accidents from slipping.

FIRM-GRIP is acclaimed by Safety Engineers of major industrial concerns for its exceptional traction quality and other safety features due to the unique assembly and engineered spacing of the contact points.

Made in various designs and sizes and adaptable for installation on skidding problem spots where other makes of gratings cannot be considered.



"Bustin — Designers and Manufacturers of Metal Products Since 1928"

Bustin FIRM-GRIP GRATING CORP.
Dover, New Jersey

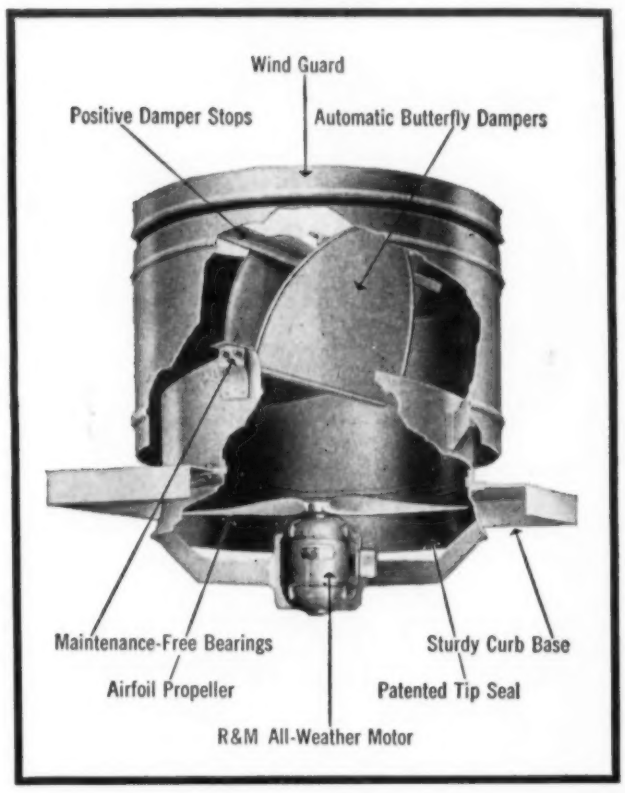
*Pat. Pending

Send for Complete Literature

▲ For more details circle NED-1041 K3 on enclosed inquiry slip ▲

SKY-BLAST®

The Modern Power Roof Ventilator



Most economical way to expel heat, fumes, smoke

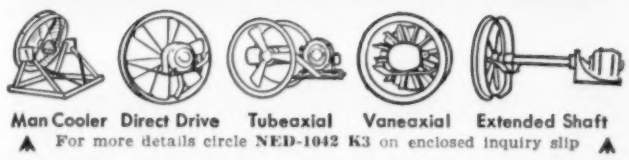
This modern power roof ventilator is backed by 20 years of research and engineering.

Famed airfoil propeller, powered by the *All-Weather* Robbins & Myers motor, sweeps up heat, moisture, dust, fumes—*then blasts them high into the outside air.* Wind guard and throat design assure constant performance regardless of wind.

Automatic butterfly dampers open wide on minimum fan pressure for guide vane effect and virtually unrestricted air flow. Galvanized roof over damper shaft and bearing supports provides rainshed when fan is not operating. Easily mounted on any type roof, Sky-Blast provides air deliveries up to 78,800 CFM. Low silhouette cuts down roof stresses. Our engineers will be glad to give you free advice on any ventilating problem.

Write for Catalog 680-N

PROPELLAIR®
DIVISION OF ROBBINS & MYERS, INC.
SPRINGFIELD • OHIO



Man Cooler Direct Drive Tubeaxial Vaneaxial Extended Shaft

▲ For more details circle NED-1042 K3 on enclosed inquiry slip ▲

Ten basic sizes with capacities from 30 Mbh to 490 Mbh. Totally enclosed motors.

nyb

UNIT HEATERS

Built to Meet Modern Industrial Requirements

Horizontal Type

Ceiling suspension type with heavy duty, welded steel, fin-and-tube heating element. (Extra heavy non-ferrous coils also available.) Suitable for continuous heating service on steam pressures up to 150 pounds or more.

Bulletin 513

Vertical, Projection Type Also Available

For efficient heating from high-ceiling areas—for door heaters over small openings—or where the horizontal type is not applicable. Ten basic sizes; capacities from 27 to 332 Mbh.

Bulletin 516

IUHA HEAT WITH UNIT HEATERS

THE NEW YORK BLOWER COMPANY

SALES OFFICES • 3171 SOUTH SHIELDS AVENUE • CHICAGO 16

FACTORY, LAPORTE, INDIANA

For more details circle NED-1043 K3 on enclosed inquiry slip

get the facts

Series 13, long top plate

Series 12, wide top plate

ON

ALBION'S VERSATILE NEW SERIES 12 AND 13 CASTERS

● These completely new . . . completely practical industrial casters have extra-wide, extra-long, formed steel top plates to afford a greater variety of bolt hole spacings that will solve practically any attachment problems. Conservatively rated as *medium* duty industrials, they are built in a wide range of rigid and swivel models with wheel diameters from 3¼" to 8". Available with steel wheels or Texite, Moldon, Rolite or Noflex for complete floor protection and super-smooth operation.

If you want longer, better service and economy . . . plus caster versatility, be sure to get the facts from Albion. Write, wire or 'phone today for your free copy of the new illustrated specification sheets on the Series 12 and 13 Industrial Casters.

ai ALBION INDUSTRIES, INC.
ALBION, MICHIGAN

Gentlemen . . . please send me complete information on your new Series 12 and 13 Industrial Casters.

NAME_____

FIRM_____

ADDRESS_____

CITY_____ STATE_____

For more details circle NED-1044 K3 on enclosed inquiry slip

New Literature & Catalogs

Electric Clutch Control

Minneapolis-Honeywell Regulator Co., Micro Switch Div.—Microtrip, an electric clutch control for power machines is subject of descriptive 12-page catalog 59. Installation on punch press, large hydraulic press and riveting machine is shown. Line of accessories, including control stations, various type switches and clutch actuators, are described as well.

For more details circle NED-1045 K3 on enclosed inquiry slip

Dust Control in Metalworking

American Wheelabrator & Equipment Corp.—How dust can be controlled in metalworking industries is discussed in illustrated folder 392. Particular attention is given to use of high-efficiency cloth-tube-type dust collectors in ventilation of grinding and annealing operations, sprue mills and blast cleaning equipment. A section is also devoted to cloth filtration in collection of foundry cupola fumes.

For more details circle NED-1046 K3 on enclosed inquiry slip

Magnesium Plate & Sheet

Brooks & Perkins, Inc.—"Magnesium Plate and Sheet to Reduce Weight" is title of 4-page folder which tabulates dimensions, tolerances, weight and relative strength and stiffness for this type metal. Back page compares gages required for equal stiffness in sheet magnesium, aluminum, brass and steel.

For more details circle NED-1047 K3 on enclosed inquiry slip

Engineered Conveyor Systems

Mathews Conveyer Co.—Intended to show the scope of company's operations, 32-page catalog 853 pictures Mathews conveyors "Engineered to Serve Production." Typical installations are shown of roller, wheel, belt, live roller, chain, overhead trolley, elevating, sheet metal roller, portable power, ball transfer, special and spring-mounted roller conveyors.

For more details circle NED-1048 K3 on enclosed inquiry slip

Sealed Beam Lamp Components

Steber Mfg. Co.—Described and illustrated in 8-page catalog 120-53 is line of Steberlite fixtures and mounting units for PAR-38, R-40 and PAR-56 sealed beam lamps. Fixed and adjustable units for standard and mogul base lamps are covered. Tables show illumination at various distances with various lamp types.

For more details circle NED-1049 K3 on enclosed inquiry slip

Electric Motors

Howell Electric Motors Co.—Performance data, electrical and mechanical characteristics, construction features and applications for line of alternating current electric motors are found in 12-page illustrated catalog. Motors range from 1/6 to 500 hp.

For more details circle NED-1050 K3 on enclosed inquiry slip

Power Shovels & Cranes

Thew Shovel Co.—Lorain 80 series of power shovels and cranes is subject of this 12-page illustrated brochure, identified as form 55570-3. Machines, which also serve as clamshell, dragline and hoe, are in the 1¾-yd class. Design and construction features, including roller bearing mounted swing shaft and hoist drum, hydraulic coupling and air controls, are explained. Many action pictures are included.

For more details circle NED-1051 K3 on enclosed inquiry slip

Electric Circulation Heaters

Edwin L. Wiegand Co.—Typical applications and operating characteristics of Chromalox electric circulation heaters are featured in 8-page bulletin 701. Folder explains how heaters give efficient, automatically controlled heating of water, steam, oil, heat transfer media, air and other gases for industrial processes. Heaters are packaged, with built-in elements, heating chamber, thermostat, insulation and mounting lugs.

For more details circle NED-1052 K3 on enclosed inquiry slip

High-Tensile, Low-Alloy Steel

Jones & Laughlin Steel Corp.—Jalten high-tensile low-alloy steel, its properties, how it is being used and how it is adapted for various applications are related in 26-page booklet. In addition to high yield strength, steel's resistance to corrosion and abrasion is superior to that of regular low carbon steels. Book includes sections on physical properties, chemistry, cold forming and total safe loads for Junior beams made of Jalten and carbon steel.

For more details circle NED-1053 K3 on enclosed inquiry slip

TOOL of a THOUSAND USES

TRI-SAW, All-Purpose, Portable Power Hacksaw

Still the same low price. ONLY $37.50

Makes Any Cutting Job Quick . . . Easy . . . Economical

Simply attach Tri-Saw to any 1/4" or 5/16" heavy duty drill—then zip through wood, sheet metal, heavy metal, nails, pipe and what have you, in seconds! Use this sensational time and work saving tool and you'll say it's the best all-purpose saw on the market. Only Tri-Saw gives you these exceptional features:

- No side torque or spin
- One shot lubrication
- Completely replaceable high speed bearings
- Improved dirt seal
- Needs no starting hole

See Tri-Saw at your jobber or write us for descriptive literature

MANUFACTURED BY
TRI-SAW CORPORATION
2207 HANLEY INDUSTRIAL COURT • ST. LOUIS 17, MISSOURI

For more details circle NED-1054 K3 on enclosed inquiry slip

And Now A RATCHET VISE WRENCH! by KNU-VISE

* Ratchet motion with slight travel of lever.

Not an ordinary wrench! But a new type of tool that also provides powerful *ratchet action* in either direction without changing your hand grip. A flip of the ratcheting clip converts tool to a standard Knu-Vise Wrench. Thus you really have two wrenches in one. And what a very useful tool you will have!

Model RVW-7 has effective grip of 13/16" max.
Model RVW-10 has effective grip of 1-3/16" max.

KNU-VISE PRODUCTS LAPEER MFG. CO.
1062 DAVISON ROAD • LAPEER, MICHIGAN

WESTERN DIVISION: 422 MAGNOLIA • GLENDALE, CALIF.
CANADIAN DIVISION: HIGGINSON ENGR. • HAMILTON, ONT.

For more details circle NED-1055 K3 on enclosed inquiry slip

JUST PRESS HANDGRIPS TO

Ht. 3 in. Wt. 30 ozs.

TEST HARDNESS OF ANY SIZE, SHAPE, TYPE METAL...

DIRECT DIAL READINGS
ACCURACY GUARANTEED BY INDIVIDUAL CALIBRATION

AVAILABLE IN:
- Rockwell "A" Range 35-75 Scale
- Rockwell "B" Range 5-100 Scale
- Rockwell "C" Range 6-70 Scale
- Rockwell "15N" Range 70-95 Scale
- Brinell Medium Range 100-440 Scale
- Brinell Low Range 50-260 Scale

Write today for Booklet ET 460 or demonstration in your shop.

NEWAGE INTERNATIONAL
ERNST PATENT
portable metal hardness testers
MADE IN U.S.A.

NEWAGE INTERNATIONAL, INC., 235 E. 42 ST., NEW YORK, N.Y.
NEWAGE (CANADA) LTD., 1174 BAY STREET, TORONTO

For more details circle NED-1056 K3 on enclosed inquiry slip

4 WAY MIXING ACTION PRODUCES HOMOGENEOUS BLENDS... Reduces Mixing Costs—

with the
STURTEVANT BLENDER

Four separate mixing actions in the Sturtevant Blender assure complete blending of various materials regardless of weights, densities, finenesses, or other physical properties.

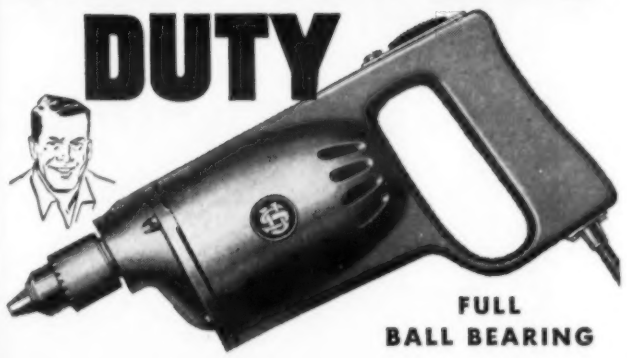
This mixing action provides a thoroughly blended product with no substances floating to remain unmixed.

Sturtevant Blenders are available in mixing capacities from 500 to 20,000 pounds. Write for information or engineering assistance.

STURTEVANT MILL COMPANY
114 CLAYTON STREET, BOSTON 22, MASSACHUSETTS
Designers and Manufacturers of
CRUSHERS • GRINDERS • SEPARATORS • CONVEYORS • MECHANICAL DENS and EXCAVATORS • ELEVATORS • MIXERS

For more details circle NED-1057 K3 on enclosed inquiry slip

CONTINUOUS DUTY



FULL BALL BEARING

This ¼" drill — $28.00*

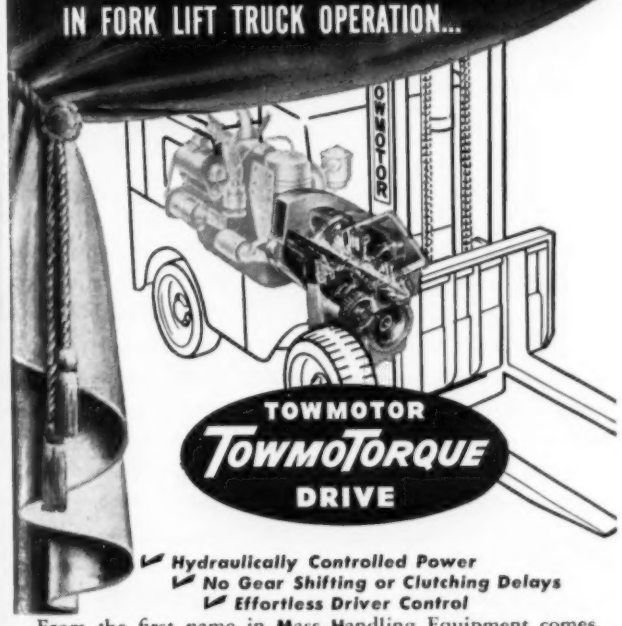
MODEL 14AU • Jacobs 3-jaw chuck with key • Rugged aluminum alloy frame • 100% ball bearing • Heat treated alloy steel gears • Capacity in steel ¼", in hardwood ½" • Cool operating under constant use. Write today for name of Distributor and catalog No. US50

*Price subject to change without notice.

United States Electrical Tool Division
THE EMERSON ELECTRIC MFG. CO.
1050 Findlay St. Cincinnati 14, Ohio

For more details circle NED-1058 K3 on enclosed inquiry slip

PRESENTING A GREAT NEW CONCEPT IN FORK LIFT TRUCK OPERATION...



✓ Hydraulically Controlled Power
✓ No Gear Shifting or Clutching Delays
✓ Effortless Driver Control

From the first name in Mass Handling Equipment comes the last word in torque drives for fork lift truck applications. Here is a product of intensive research and engineering, truly a trouble-free torque converter drive—available to match the capacity range of all Towmotor power plants. For the complete story in a nutshell—send for book on TowmoTorque now. Towmotor Corporation, Div. 2510, 1226 E. 152nd St., Cleveland 10, Ohio.

TOWMOTOR ENGINEERED FOR QUALITY PERFORMANCE

For more details circle NED-1059 K3 on enclosed inquiry slip

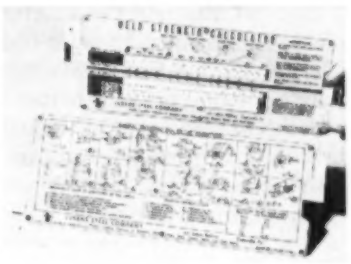
New Processes & Materials

HYDRAULIC FLUID
is fire resistant type

Usable in hydraulic equipment operated near open flames or adjacent to extreme heat conditions, Houghto-Safe hydraulic fluid combines fire-resistant qualities with top hydraulic efficiency. In hydraulic pump tests, this water-base, "snuffer type" fluid shows lubricating ability of high grade petroleum oils. It will not freeze, pumps easily at working temperatures down to 0° F, will not attack synthetic rubber packings and has viscosity index of 150. Fluid can be used efficiently at 1000-psi pump pressure and does not separate or break down under increased pressures. Developed by **E. F. Houghton & Co.**, 305 W. Lehigh Ave., Philadelphia 33, Pa.

For more details circle NED-1060 K3 on enclosed inquiry slip

WELD STRENGTH CALCULATOR
for stresses from 2000-20,000 psi



Both size of weld required for given applied load and the weight of a given length of weld in pounds are indicated by this weld strength calculator. A companion tool to Lukens plate size selector, plastic slide rule type unit gives values for stresses ranging from 2000 to 20,000 psi, and applied loads from 9000 to 450,000 lb. On reverse side is shown basic design data for welded connections, plus formulas for calculating nominal properties of welded connections. Available from **Lukens Steel Co.**, 308 Lukens Bldg., Coatesville, Pa.

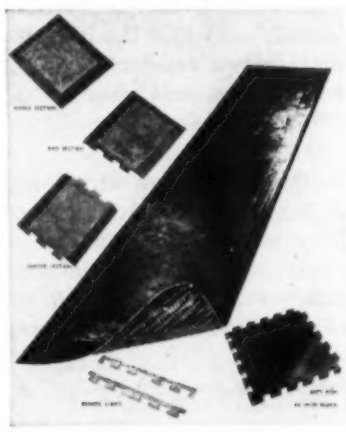
For more details circle NED-1061 K3 on enclosed inquiry slip

STRIPPABLE PROTECTIVE COATING
for clear lacquer or lacquer enamels

Easily stripped off without danger of lifting the lacquer, Copeel No. 583 strippable protective coating is specifically formulated for protecting surfaces finished with clear lacquers or lacquer enamels. It can be applied before or after assembly of lacquered parts and affords protection during the various subsequent handling operations. Made by **Maas & Waldstein Co.**, 2130 McCarter Highway, Newark 4, N. J.

For more details circle NED-1062 K3 on enclosed inquiry slip

RUBBER MATTING
air pockets minimize foot fatigue



Now available with waffle-type bottom containing thousands of air pockets for relief of foot and leg fatigue, Air Strip rubber matting finds application wherever it is necessary to stand at a job for any length of time. It is made in single mats, section with ends to interlock to form a long strip, and square blocks interlocking on all four sides. Product is also available in a variety of compositions and colors to meet different conditions such as resistance to oil and chemicals and to harmonize with color schemes. Standard thickness is ½-in. Made by **R. L. Mitchell Rubber Co.**, Dept. L, 2114 San Fernando Rd., Los Angeles 65, Calif.

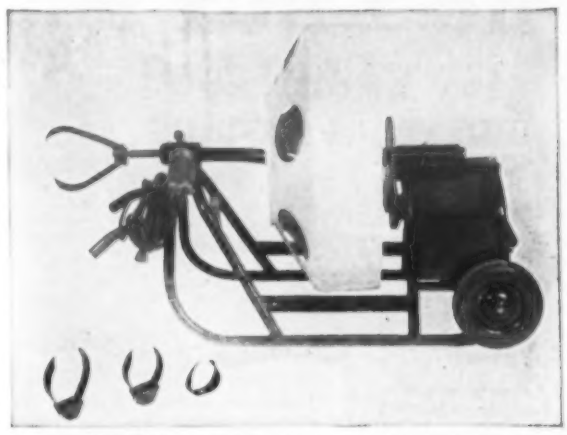
For more details circle NED-1063 K3 on enclosed inquiry slip

HEAT-RESISTANT CEMENT
sticks sandpaper to sanding disks

A heat-resistant cement for adhering sandpaper to metal or wood sanding disks, No. 994 Griptex does not become sticky under heat. Sandpaper disks need not be stripped individually as they wear, but can be cemented on top of each other until six or eight have accumulated and then all removed at once. Made by **Adhesive Products Corp.**, 1662 Boone Ave., Bronx, N. Y.

For more details circle NED-1064 K3 on enclosed inquiry slip

CLEANS SEWERS OR FLUES



STURDY MOBILE PORTABLE

Drains are unclogged in minutes with Clean-Rite rugged improved drain cleaner. Complete positive chain drive permits machine to rotate in either direction with or without power, giving nonslipping operation. High carbon steel knives clean entire diameter of pipe or flue, compressing to go through small openings yet expanding to fit large diameters. Very essential to your Maintenance Department. Very profitable equipment. A big money saver. The new Clean-Rite was developed in many years in the sewer cleaning business and is designed to do a more thorough job in much less time. Approved and admired by all professional sewer cleaners. You can not buy a better one.

GROVE MACHINE WORKS
208 Grove St., Dept. NED, Bowling Green, Ohio

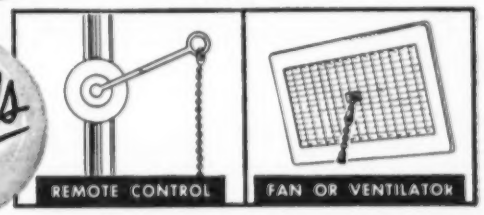
For more details circle NED-1065 K3 on enclosed inquiry slip

DOES SO MANY THINGS ...so much Better!

Versatile BEAD CHAIN

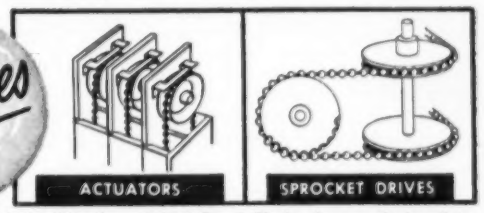
There are literally thousands of useful applications of BEAD CHAIN to all types of products, machines and tools! Consider how you may be able to take advantage of its versatility too! It pays dividends!

it Pulls



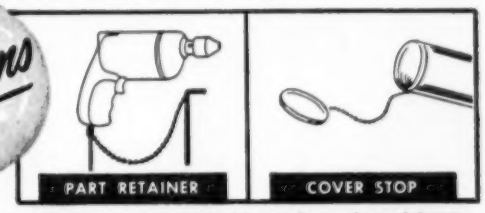
Bead Chain is available in 5 diameters from 3/32" to 3/8" with tensile strength ranging from 18 to 200 lbs. No matter what the requirement, our engineers can fill your need.

it Drives



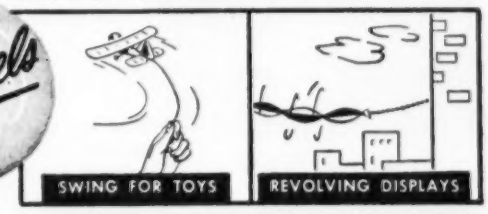
Only this, the original Bead Chain, is manufactured to such close tolerances that it can be applied at low cost to V-type or positive, non-slip sprockets. (Sprocket sources for your needs available on request.)

it Fastens



Bead Chain's unique assembly service and special automatic equipment can supply chain cut to your requirements, complete with attachments, at a substantial saving.

it Swivels



A large variety of couplings and attachments offer endless opportunities to design engineers to adopt Bead Chain without the necessity of special tooling and production.

B®

THE BEAD CHAIN MANUFACTURING CO.
BRIDGEPORT 5, CONN.
Send Me the Bead Chain Catalog.
NAME ..... TITLE .....
COMPANY .....
ADDRESS .....
KEY NO. 16

send for FREE HELPFUL CATALOG

THE BEAD CHAIN MANUFACTURING CO., BRIDGEPORT 5, CONN.
Original and World's Largest Producer of Bead Chain

For more details circle NED-1066 K3 on enclosed inquiry slip

no. 1 BUY for handling INDUSTRIAL LIQUIDS!

QUALITY TOKHEIM DOUBLE-ACTION HAND PUMPS

Here's why a Tokheim is better!

- ***More efficient!*** Even at low temperatures—double-action—no wasted motion.
- ***More useful!*** Handles many liquids of most any viscosity including oil and water.
- ***Safer!*** Eliminates many dangers common to other methods of transfer.
- ***Trouble-free!*** Not affected by ice, dirt, etc.—easily serviced.

Tokheim is tops with many manufacturers. And for good reasons! Rugged diaphragm construction. Low original cost. Dependable service-free performance. Delivers up to 20 gallons per minute. Offered with optional parts for handling a wide range of liquids. Available with hose or spout outlets for drum, skid tank or underground installations. Call your dealer or your Tokheim representative.

Write factory for literature

General Products Division
TOKHEIM OIL TANK AND PUMP CO.
Designers and Builders of Superior Equipment Since 1901
WABASH AVE., FORT WAYNE 1, IND.
Canadian Distributor: H. Reeder, 205 Yonge St., Toronto

For more details circle **NED-1067 K3** on enclosed inquiry slip

the switch is ON to **GUARDIAN** *Relays*

In this modern safety device, a beam of light crosses the point of operation and is reflected into a photo-tube. A broken or modulated beam actuates the tube and a Guardian Relay breaks the circuit to lock the press in the "Up" position until the full light beam is restored. Typical of such a relay is the Guardian Series 5 D.C.

Guardian Relays, Steppers, Contactors and Solenoids specified *at the design stage*, provide more power in less space, make your product instantly responsive, more saleable. Write.

Series 5 D C Relay

AIRCRAFT CONTROLS

Complete interchangeability (open types or hermetically sealed) meets new control specifications with no changes in frame drawings. Write for Circular 1R.

Interchangeable 10 Amp Relay 4 P.D.T.

200 Ampere Solenoid Contactor

GUARDIAN ELECTRIC
1626-L W. WALNUT STREET CHICAGO 12, ILLINOIS
A COMPLETE LINE OF RELAYS SERVING AMERICAN INDUSTRY

For more details circle **NED-1068 K3** on enclosed inquiry slip

Increase Your profits by knowing more about your costs

THE *Simplex* COST RECORDER

gives you 100% accounting of your employees' Time

STOPS TIME LEAKS

PRODUCES INDISPUTABLE RECORDS

REDUCES NON-PRODUCTIVE TIME

Your records show exact starting and ending time for each job... accurate printed records made by the employee, quickly, easily, without loss of time. Simplex Cost Recorders are fully automatic, and give you fast, accurate time computation for payroll make-up, as well as cost accounting.

SIMPLEX TIME RECORDER CO., Gardner, Mass., Dept. N-10
Please give us more information on:
☐ Cost Recorder ☐ Time Cards ☐ Electric Time Stamp
☐ Watchman's Clock ☐ Time Card Files ☐ Time Card Racks
Firm.....
Name.....
Street & No.....
City..... State.....

For more details circle **NED-1069 K3** on enclosed inquiry slip

New Literature & Catalogs

Silicone Rubber Products

Garlock Packing Co.—Many silicone rubber products made by this company are described and illustrated in 8-page bulletin AD-147. Included are diaphragms, gasketing, sheet packing, oil seals, rings, insulation tape, rod and valve stem packings and molded shapes for many uses. Characteristics of the material and examples of typical applications are given.

For more details circle **NED-1070 K3** on enclosed inquiry slip

Industrial Filtration

Industrial Filtration Co.—Featuring continuous, full-flow, self-cleaning, fully automatic disposable belt-type filtration, Delpark filters as applied to coolants, quenching oils and paint spray booth water are described in 8-page booklet. Complete dimensions and capacities of various filters are tabulated.

For more details circle **NED-1071 K3** on enclosed inquiry slip

Furnace & Induction Brazing

General Electric Co.—Latest in a series on modern metal processing, 12-page booklet GEA-5889 employs over 30 photos to explain how furnace and induction brazing have proven more economical than former processes. Examples include cases where furnace brazing has replaced casting, forging, machining and welding of parts; and where induction brazing has replaced torch brazing, soldering and riveting.

For more details circle **NED-1072 K3** on enclosed inquiry slip

Calculating Nylon Part Costs

Nylon Molded Products Corp.—With molded nylon seeing wide application in a wide variety of products, this company is making available a brochure which provides a simple three-step procedure for figuring the material cost of a nylon part. Also included are other considerations in specifying injection molded parts.

For more details circle **NED-1073 K3** on enclosed inquiry slip

Flow Rate Meters

Fischer & Porter Co.—Besides discussing Flowrator meters, this 16-page catalog (10-A-10) presents objective comparisons between these variable area types and more common variable-head meters. How the meter works, plus data on calibration scales, metering range, viscosity effects, purging and pulsating flow, are discussed.

For more details circle **NED-1074 K3** on enclosed inquiry slip

Piping & Pressure Vessels

Taylor Forge & Pipe Works—Those interested in problems dealing with piping and pressure vessels will be interested in the regular publication "Taylor Forge." First issue has information on codes and standards dealing with this subject, tables of allowable stresses under the ASME code and the code for pressure piping. Literature views are included.

For more details circle **NED-1075 K3** on enclosed inquiry slip

Die Sets & Supplies

Superior Steel Products Corp.—24-page wire-bound illustrated catalog No. 30 describes standard two and four-pin die sets, special units, plus such auxiliaries as bolster plates, composites, guide pins, bushings and Spira-Lock removable pins. Specifications for each item are given, along with prices and ordering information.

For more details circle **NED-1076 K3** on enclosed inquiry slip

Pipe & Tubing Stress Values

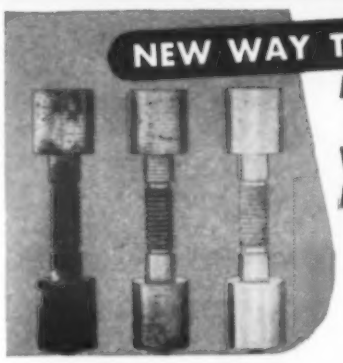
Babcock & Wilcox Co., Tubular Products Div.—Maximum allowable stress values of a range of seamless and welded carbon, alloy and stainless steel tubing and pipe are tabulated in data card TDC 154. It is an adaption of table P-7 of the ASME boiler code and has formulas for calculation of the maximum allowable working pressure of tubing and pipe.

For more details circle **NED-1077 K3** on enclosed inquiry slip

Punch Presses

Kenco Mfg. Co.—Four models of bench type presses shown in 4-page bulletin include 4 and 5-ton open back models and same sizes in Four-In-One models which can be converted to standard die space, long die space, half and horn types. Also described are 4 and 6-in. swivel-base vises for precision machining work, and a line of 8 and 12-in. diameter rotary tables which are graduated from 0 to 360 degrees and have dials graduated in minutes.

For more details circle **NED-1078 K3** on enclosed inquiry slip



NEW WAY TO STOP RUST

Easily! Quickly! Without Slushing

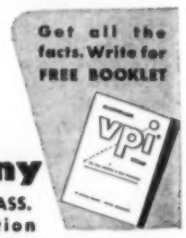
MARVELLUM VPI WRAP

Paper coated with a Volatile Corrosion Inhibitor

Look at these steel samples — they tell the story. After 3 years of unsheltered storage outdoors in an industrial marine atmosphere, only the VPI wrapped sample on the right is still bright and clean. The untreated sample on the left was wrapped in plain kraft, the middle one treated with a good rust-preventive oil and wrapped in Grade A barrier material. All were overwrapped with kraft-asphalt paper. *Your* steel or aluminum parts can be equally well protected from corrosion. VPI, developed for government use during the war, is now available to everyone. Economical, easy to use, VPI can save you time and money.

Marvellum VPI is available in sheets, envelopes or special containers. Marvellum has complete facilities under one roof for designing, producing and coating VPI Wraps. Also makers of a wide range of other barrier materials to meet your needs for product protection. Distributors in all major cities.

Get all the facts. Write for FREE BOOKLET



The Marvellum Company
32 APPLETON STREET HOLYOKE, MASS.
First and Foremost in VPI Protection

For more details circle **NED-1079 K3** on enclosed inquiry slip

Our Man IS YOUR MAN

The M & T representative is backed by a line of welding materials and equipment as complete as any available anywhere. In addition, he is a seasoned, practical welding engineer, well qualified to be of genuine help on your welding problems.

If the latest in welding techniques, equipment and materials can assist you, *our man is your man*—for orders or advice.

DETINNING • THERMIT WELDING • METALS and ALLOYS • ARC WELDING—Materials and Equipment CHEMICALS and ANODES for Electrotinning CERAMIC OPACIFIERS • STABILIZERS for Plastics TIN, ANTIMONY and ZIRCONIUM CHEMICALS

VISIT US At the METAL SHOW—Booth 1908.

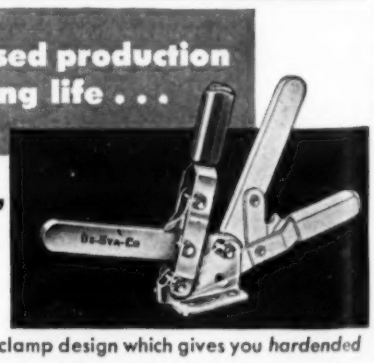
METAL & THERMIT CORPORATION
100 EAST 42ND STREET • NEW YORK 17, N. Y.

Murex Electrodes · Arc Welders · Accessories

For more details circle **NED-1060 K3** on enclosed inquiry slip

NOW increased production and long life . . .

with "HARD-BUSHED"

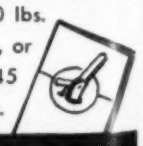


DESTACO

TOGGLE CLAMPS

This is *new*—Destaco's new clamp design which gives you *hardended* bushings in all series 210, 220, 228 and 240 toggle clamps. The new bushings run full length through the clamp bars from a *larger* bearing surface—and they're deeply serrated to lock in position with no chance of turning in the bars. You get a minimum of wear, smooth, accurate snap action, even under tough production conditions. A feature of our heavier series for some years, this development sets new standards for tooling requiring 500 to 800 lbs. pressures. Further improvements have been incorporated in the "wrap around" construction which strengthens the base.

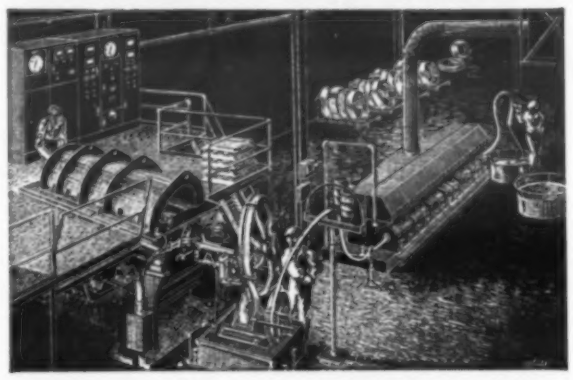
For any fast clamping action in milling, drilling, welding, bonding, molding, riveting or bolted assembly operations—specify Destaco Toggle Clamps for pressures up to 4000 lbs. Consult our stocking representatives in your area, or select from our 36-page catalog describing over 45 models. Write for his name and your copy today.



DESTACO **DETROIT STAMPING COMPANY**
360 Midland Ave. • Detroit 3, Mich.

For more details circle **NED-1081 K3** on enclosed inquiry slip

From Molten Aluminum to 3/8" Diameter Rod in 1½ Minutes!



ROME CABLE CORPORATION USES

AJAX

INDUCTION FURNACES

for melting aluminum for continuous casting and rolling of high conductivity rod.

VISIT AJAX BOOTH, NO. 221, AT METAL SHOW

AJAX TAMA-WYATT INDUCTION MELTING FURNACE

AJAX ELECTRO METALLURGICAL CORP., and Associated Companies
AJAX ELECTROTHERMIC CORP.
AJAX ELECTRIC CO., INC.
AJAX ELECTRIC FURNACE CORP.

▲ For more details circle NED-1082 K3 on enclosed inquiry slip ▲

ACE PLASTIC EXTRUSION

PLUS FABRICATION

- from Rods,
- Sheets, Tubes,
- Special Shapes

Extruded parts from the raw material to the finished product . . . an Ace specialty. Ace Plastic rods, tubes and shapes are custom extruded and machined automatically to your most exacting specifications. Let our engineers assist you with your plans.

WRITE TODAY FOR SAMPLES, send prints for quotations.

By the manufacturers of famous Ace Nylon Balls

ACE HIGH QUALITY

ACE PLASTIC COMPANY
Precision Plastic Fabricators and Extruders

91-28 Van Wyck Expressway • Jamaica 35, N. Y.

▲ For more details circle NED-1083 K3 on enclosed inquiry slip ▲

NOW! AN IMPROVED LOW COST CASTER

with Hardened Raceways Unbreakable Fork and Top Plate

SERVICE PRESSWELD CASTERS

STRONG! AGILE! QUIET!

Here, at last, is a truly efficient, light-weight caster in the low-cost field. Ideal for Dollies, Racks, Box Trucks and similar applications in the moderate capacity range. Many features usually found only in high price casters provide for years of trouble-free performance. Get PressWelds — and get SERVICE quality at low cost.

Write for sizes, capacities and low prices

INDOORMITES Made BIGGER and SAFER

SERVICE CASTER & TRUCK CORP.

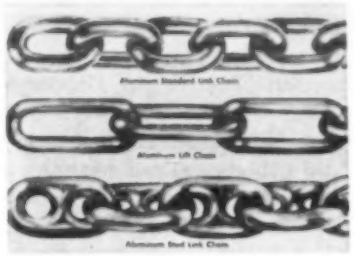
Executive Offices: Albion, Michigan
Plants at Albion, Michigan & Somerville 43, Mass.

See your Classified Telephone Directory for Nearest Distributor

▲ For more details circle NED-1084 K3 on enclosed inquiry slip ▲

New Processes & Materials

ALUMINUM CHAIN
for service and ornamental use



Light, strong and durable, this aluminum chain needs no painting and is produced in standard sizes. Made by a molding process, each link of chain is smooth, perfectly formed and noncorrosive. It is suitable for ornamental, marine and service use. Illustration shows standard link, lift and stud link chains (from top to bottom). Made by **Bison Metals Corp.**, Sixth Floor, Crosby Bldg., Buffalo 2, N. Y.

▲ For more details circle NED-1085 K3 on enclosed inquiry slip ▲

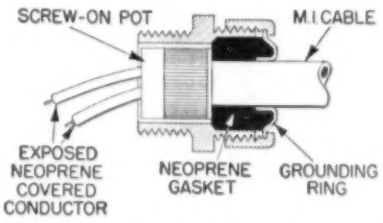
FIRE RETARDANT PAINT
prevents spreading of flames

In addition to providing durable, attractive interior finish, Fyr-Kote oil paint retards fire and stops flames from spreading. When exposed to abnormal heat or flame, finish emits carbon dioxide and calcium chloride which smothers flame. Paint has been listed by UL and has passed applicable Federal specifications and U. S. engineer's tests according to the manufacturer, **Morris Paint & Varnish Co.**, Fyr-Kote Div., Dept. NED, 27th & Douglas St., Omaha 2, Nebr.

▲ For more details circle NED-1086 K3 on enclosed inquiry slip ▲

ELECTRICAL CONNECTOR
for mineral-insulated cable

Providing a watertight connection for mineral insulated cable, this box fitting utilizes a Neoprene gasket as a moisture seal which permits standardization on three connector sizes to fit mineral insulated cables from 0.309 to 0.730-in. diameter. The washer type grounding ring around the gasket insures a grounding path from the raceway to the fitting's metallic body. Watertightness is insured at the junction box or switch by the tapered hub threads. The screw-on pot shown in illustration contains a plastic filler acting as a further seal. Made by **Thomas & Betts Co.**, 24 Butler St., Elizabeth 1, N. J.



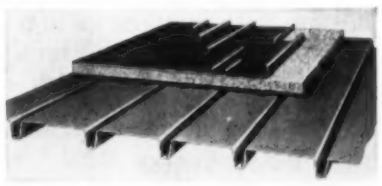
▲ For more details circle NED-1087 K3 on enclosed inquiry slip ▲

HARDFACING OVERLAY
hardness up to Rockwell C 65

Applied by painting on the metal surface to be treated and then heating with torch or carbon arc, Eutec-Instant-Overlay KR-6900 is available in both paste and powder form and gives a thin hardface with hardness up to 65 Rockwell C. Film can be built up by successive applications if required. Made by **Eutectic Welding Alloys Corp.**, Dept. P, 172nd St. & Northern Blvd., Flushing 58, N. Y.

▲ For more details circle NED-1088 K3 on enclosed inquiry slip ▲

RIB STEEL ROOF DECKING
is lightweight for short spans



Short roofing jobs where high carrying capacity is not critical can be done economically with Fenestra Econorib, an open rib steel roof decking. It is 1½ in. deep with a full Z4 coverage in 18 or 20-gage NCB steel and is formed with ½-in. base, full last rib and a ¾-in. rib opening. Econorib is lighter in weight than its companion product Holorib which is designed for longer spans and heavier loads. It is crimped 3 in. at one end because of its open rib design, but can be overlapped several feet and forced into place, eliminating cutting on last runs of jobs. Picture shows decking topped with insulation and tar paper of standard type. Roof decking is made by **Detroit Steel Products Co.**, 2251 E. Grand Blvd., Detroit 11, Mich.

▲ For more details circle NED-1089 K3 on enclosed inquiry slip ▲

FEDERAL PRESSES

28 YEARS OF QUALITY CONSTRUCTION

This Federal #44 has generous, "oversize" dimensions, making it ideal for light, bulky work that small standard presses can't handle. Note its *extra* shut height, *extra* throat depth, *extra* ram and bed areas. Typical Federal workmanship and quality. Available in flywheel or geared models—also in 26-ton size. High speed controls, optional.

Write for new catalog showing complete line. Six to 80-ton capacities.

NO. 44 FLYWHEEL TYPE 35-ton Capacity

THE FEDERAL PRESS COMPANY
506 Division Street, Elkhart, Indiana

▲ For more details circle NED-1090 K3 on enclosed inquiry slip ▲

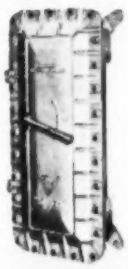
You'll Find Quality and *Maximum* Protection in

COMBINATION STARTERS

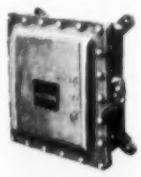
R&S *Explosion-Proof* MOTOR CONTROL EQUIPMENT

PUSH BUTTONS

MOTOR STARTERS



CIRCUIT BREAKERS



DISCONNECT SWITCHES

For over 50 years, R&S policy has combined the same basic "ingredients" into every equipment item—finest materials, top quality, sound engineering design, precision manufacture, and features that meet all standards, *plus!*

R&S Motor Control Equipment features include: Wall sections permitting a wide variety of conduit arrangements . . . ample wiring space . . . removable front covers for close grouping and easy maintenance . . . an improved adjustable handle with visible limit stops and provision for padlocking in "off" and "on" positions.

R&S also incorporates these standard components into factory assembled complete panelboards to meet specific needs.

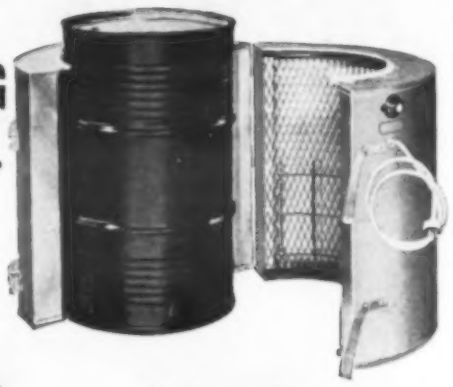
Write for Catalog H-47-15

RUSSELL & STOLL COMPANY, INC. • 125 BARCLAY ST., N. Y. 7, N. Y.

RUSSELL & STOLL
PRECISION-BUILT ELECTRICAL EQUIPMENT—SINCE 1902

▲ For more details circle NED-1091 K3 on enclosed inquiry slip ▲

WARMS ANYTHING IN METAL DRUMS UP TO 450°F



Palmer Automatic DRUM WARMER

A portable electric oven in two models for 55 or for 30 gallon steel drums.
Saves Time—Saves Money. Makes removal from drum by dipping, pouring or pumping, easy and convenient, for any viscous material that handles better when warm.
Operates automatically and economically. Two hinged halves, well insulated, fit around drum at point of use—eliminates handling hot drums.
Supplied for 208, 230 or 460 volts, single, or three phase. Catalogue, prices and specifications on request. Write today!

HAROLD L. Palmer COMPANY
2980 West Davison Ave.
Detroit 6, Michigan

For more details circle NED-1092 K3 on enclosed inquiry slip

M&M air fluff paper shredder

The Air-Fluff Paper Shredder is used for the commercial manufacture of paper excelsior. Also speedily, safely and efficiently destroys blueprints, letters and confidential records. Built in 3 sizes ranging in capacity from 200 to 2500 pounds per hour. Each machine can be adjusted to cut widths of 1/8", 3/16", 1/4", or 3/8". Write for descriptive literature.

mitts & merrill
1000 South Water • SAGINAW, MICHIGAN

For more details circle NED-1093 K3 on enclosed inquiry slip

TEMPILSTIKS°

the amazing Crayons that tell temperatures

in
WELDING
FLAME-CUTTING
TEMPERING
FORGING
CASTING
MOLDING
DRAWING
STRAIGHTENING
HEAT-TREATING
IN GENERAL

$2 each gives up to 2000 readings

it's this simple:
• Select the Tempilstik° for your working temperature.
• Mark your workpiece with it.
• The Tempilstik° will leave a liquid mark as soon as its specified temperature is reached.

Available in these temperatures (°F)

113	213	313	450	850	1250	1650
125	225	325	500	900	1300	1700
138	238	338	550	950	1350	1750
150	250	350	600	1000	1400	1800
163	263	363	650	1050	1450	1850
175	275	375	700	1100	1500	1900
188	288	388	750	1150	1550	1950
200	300	400	800	1200	1600	2000

Also available in pellet and liquid form.

BOOTH 841—NATIONAL METALS SHOW

TEMPIL CORPORATION
11 West 25th St., New York 10, N. Y.

FREE—Tempil° "Basic Guide to Ferrous Metallurgy" —16½" by 21" plastic-laminated wall chart in color. Send for sample pellets, stating temperature of interest to you.

NAME _____
COMPANY _____
ADDRESS _____

For more details circle NED-1094 K3 on enclosed inquiry slip

New Literature & Catalogs

Radio & Electronic Parts

Allied Radio Corp.—In 268 pages of company's 1954 general catalog are listed over 20,000 items. Emphasis is placed on equipment for industrial maintenance, research and production. A rotogravure section lists Knight UL-approved public address amplifier in 8 to 80 w systems. Recording equipment section includes Ampex tape recorders, Magnecorders and others. Other sections are devoted to kit builders, manuals and diagrams as well as lists of books on theoretical and practical radio, electronics and electricity.

For more details circle NED-1095 K3 on enclosed inquiry slip

Nickel Plating Process

General American Transportation Corp.—Technical details of Kanigen nickel plating process which requires no electrical equipment and which is said to have few limitations are found in 16-page illustrated folder and 4-page bulletin. Pieces of any shape, size and almost any material can be plated with virtual zero porosity. Deposit is uniform, even on screw threads.

For more details circle NED-1096 K3 on enclosed inquiry slip

Bearings, Bar Bronze & Babbitt

Johnson Bronze Co.—Listed in 104-page illustrated catalog 530 are thousands of general purpose bronze bearings, graphite bearings, electric motor bearings, Ledaloyl flange bearings, solid and hexagon bars, cored bars, and babbitt products. Also included are bearing technical data, listing of bearings for standard electric motors, oil grooving and alteration information and general data.

For more details circle NED-1097 K3 on enclosed inquiry slip

Flexible Hose & Bellows

Flexonics Corp.—Flexible metal hose and instrument bellows are described in 16-page illustrated catalog CMH-132. Stainless steel, brass and bronze bellows; bellows assemblies; and devices are presented with complete specifications. All hose data are also given on convoluted and corrugated types as well as flanges, couplings and other fittings. Special-purpose hose assemblies and installation instructions are also given.

For more details circle NED-1098 K3 on enclosed inquiry slip

Drill & Cutting Tool Power Unit

Drillunit, Inc.—A power source for operating drill and cutting tools, the Drillunit is described in illustrated brochure of 4 pages and accompanying data sheet. Single and multiple installations are shown for the long-stroke unit. Specifications are given.

For more details circle NED-1099 K3 on enclosed inquiry slip

Automatic Machinery & Tooling

Ace-Central States Machine Tool Co.—Trend toward automatic manufacturing equipment and combining of basic services in creating such machinery and special tooling are subjects of "Design and Build," a 12-page illustrated booklet. It describes services and facilities made available by combining abilities of two companies.

For more details circle NED-1100 K3 on enclosed inquiry slip

Coatings for Masonry

Bakelite Co.—Concrete, stucco, cinder block, brick, plaster and porcelain surfaces can be protected by Bakelite and Vinylite resin coatings described in 8-page brochure BV. Coatings resist effects of varying weather conditions as well as most acids, alkalies and other chemicals, foodstuffs, oil and greases. Many uses and various application methods are shown.

For more details circle NED-1101 K3 on enclosed inquiry slip

Time Delay Switch

Elastic Stop Nut Corp. of America, AGA Div.—The Agaswitch, a manually actuated and pneumatically timed switch designed to introduce one or more time delay periods into an electrical circuit is subject of 4-page illustrated form SW-2. Electrical data, applications and features are given.

For more details circle NED-1102 K3 on enclosed inquiry slip

Automatic Instrumentation

Minneapolis-Honeywell Regulator Co., Industrial Div.—Various ElectroniK instruments that accelerate research and test problems are described in 6-page bulletin No. 14-1. It covers various servo-components and accessories.

For more details circle NED-1103 K3 on enclosed inquiry slip

"BIG SAVINGS OF LABOR AND MATERIAL"

with portable Greenlee Hydraulic Conduit Bender

Quickly produce your own conduit bends *right on the job*. With a GREENLEE Bender *one man* in but a few minutes makes smooth, *accurate* bends in pipe up to 5", rigid and thin-wall conduit. Many owners report time and labor savings from 50% to 90% . . . and cost of many manufactured bends and fittings completely eliminated. Get facts now on this tool that often pays for itself on the first job.

GREENLEE

FREE BENDER BOOKLET with complete data on GREENLEE Benders for pipe, conduit, tubing. Write today, Greenlee Tool Co., 1950 Herbert Ave., Rockford, Illinois.

For more details circle NED-1104 K3 on enclosed inquiry slip

ASKANIA
AUTOMATIC REVERSAL SYSTEM FOR REGENERATIVE FURNACES

The Askania Reversal Cabinet is the modern tool for reversing firing direction in a regenerative furnace. It insures accurate timing, unvarying correct reversal sequence and absolute safety.

Eliminate errors, save fuel, reduce fuel-off time.

Write for Bulletin 159 for details.

ASKANIA REGULATOR COMPANY
258 E. Ontario Street Chicago 10, Illinois
Subsidiary of General Precision Equipment Corp.

For more details circle NED-1105 K3 on enclosed inquiry slip

KEYNOTES

"Hey, Joe . . . LOOK!"

Key-Graphite Paste is used EVERYWHERE for sealing oil and high pressure steam lines.

(Write for free sample . . . it's "out of this world!")

SEALS TIGHT . . . BREAKS RIGHT!

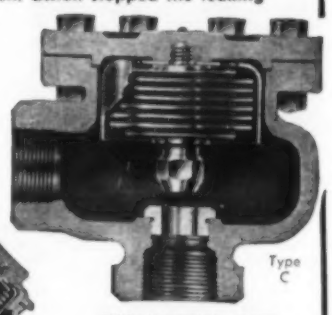
A Product of KEY COMPANY
2601 McCasland • East St. Louis, Illinois

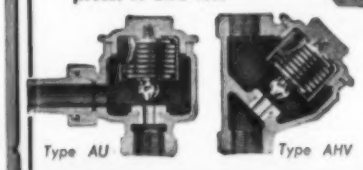
For more details circle NED-1106 K3 on enclosed inquiry slip

Nicholson Traps Prove

BEST FOR VARYING CONDENSATE LOADS

An Eastern processor's tests proved that Nicholson thermostatic traps, due to their 2 to 6 times average drainage capacity, were best able to stop the back-up of condensate during alternating warm-up periods. At the same time, their positive intermittent action stopped the leaking of steam during the later lesser normal loads. See why leading plants are increasingly standardizing on Nicholsons for faster heat transfer. 5 types: size ¼" to 2"; press. to 250 lbs.



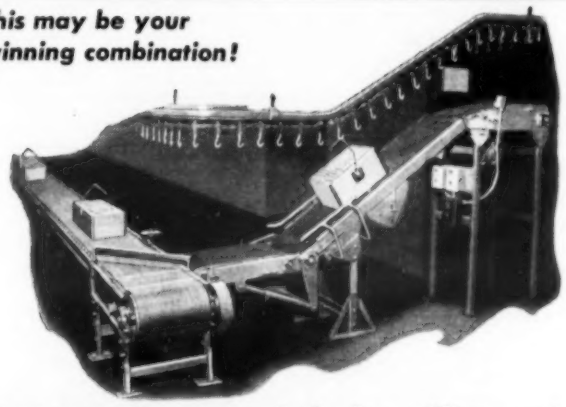


BULLETIN 853
162 Oregon St.
Wilkes-Barre, Pa.

W. H. NICHOLSON & CO.
TRAPS · VALVES · FLOATS

For more details circle NED-1107 K3 on enclosed inquiry slip

This may be your winning combination!



Automatic materials handling with

MHS STANDARD UNITS

Send for FREE Bulletin PE-2 today!

MHS Transveyor, Liftveyor and Junior Monoveyor combine with simple transfers to make an automatic materials handling system. Conveyor units are stock items, ready to ship, economical to buy, easy to erect, efficient in operation.

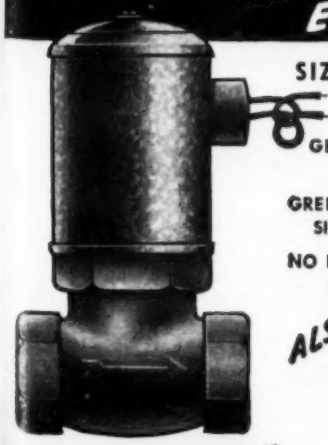
Look into MHS pre-engineered conveyors to speed handling, cut labor costs, reduce expense!

MECHANICAL HANDLING SYSTEMS INC.
4615 Nancy Avenue, Detroit 12, Michigan
Offices in Principal Cities
In Canada: Canadian Mechanical Handling Systems Ltd., Toronto

For more details circle NED-1108 K3 on enclosed inquiry slip

GOULD Type A SOLENOID VALVES

SIMPLICITY RUGGEDNESS ECONOMY!



SIZES • ¼"-⅜"-½"-¾"

PRESSURES:
GENERAL SERVICE 500 PSI
STEAM 150 PSI

GREENCLAD WATERPROOF COILS
SILICONE COILS FOR STEAM

NO DAMAGING WATER HAMMER
PISTON-PILOT OPERATED

ALSO VELVETROL TRADE MARK

FLOW CONTROL SERIES
Plus all above features. ¼ to 2" sizes.

VELVETROL DL and D Valves incorporate new O-Ring bonnet seal.

WRITE FOR CATALOG!

J. D. GOULD COMPANY
730 EAST WASHINGTON ST. • INDIANAPOLIS 2, IND., U.S.A.

For more details circle NED-1109 K3 on enclosed inquiry slip

NEW EQUIPMENT DIGEST
EQUIPMENT · MATERIALS · PROCESSES · DESIGNS · APPLICATIONS · LITERATURE

Penton Building, Cleveland 13, Ohio

A. N. GREGG ..... Editor
H. J. HOLTZ ..... Assoc. Editor
GEO. SOTAK JR. ..... Ass't. Editor
MICHAEL A. L. WEBSTER Ass't. Editor
F. O. RICE ..... Publisher
WALTER STAAB ..... Adv. Service Mgr.
A. BUGOSH ..... Sales Prom. Mgr.
HAZEL DAVIS ..... Adv. Production Mgr.
J. W. CLOSE ..... Circulation Mgr.

ADVERTISING REPRESENTATIVES

Cleveland 13 ..... L. H. WEBER, G. B. GUEST, M. E. OLSON
Penton Building, Main 1-8260
Rochester 17, N. Y. ..... G. F. JOHNSON
66 Charlton Rd., Congress 2322
Chicago 11 ..... J. H. ROBISON, W. J. LOWITZ, J. M. WELLS
520 N. Michigan, Whitehall 4-1234
New York 17 ..... B. R. BAKER, G. M. BERNARD
60 E. 42nd St., Murray Hill 2-2581
Philadelphia ..... V. W. VOLK
7 N. Drexel Ave., Havertown, Pa., Hilltop 6-3199
Los Angeles 4 ..... F. J. FULLER
6262 Commodore Sloat Drive, Webster 1-6865
Griffin, Ga. ..... FRED J. ALLEN
331 S. Twelfth St., Griffin 7854

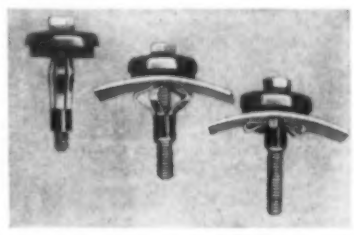
New Equipment Digest is published monthly by Equipment Digest Publishing Co., Penton Building, Cleveland 13, Ohio; G. O. Hays, President; F. O. Rice, Vice President & Secretary; J. R. Dawley & J. H. Robison, Vice Presidents; E. L. Shaner, Treasurer; J. P. Lipka, Asst. Secy. & Asst. Treas.

Publisher's Notice: We assume no responsibility for the validity of claims in connection with news items appearing in New Equipment Digest. Addresses are given to facilitate further inquiry.

NBP CCA

OCTOBER, 1953

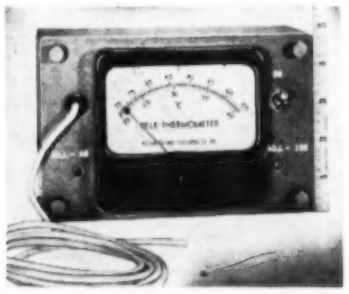
LEAK-STOPPING PLUG also for blind fastening jobs



Leaks in tanks, pipes and shipping drums can be stopped by this utility plug which is also suitable for blind fastening applications. Only preparation required is to drill or punch a ⅜-in. hole into which the plug is inserted. Turning the bolt draws up the end nut, forcing segments of the split sleeve outward to form a "spider" inside (see photos). When fully drawn up, the heavy Neoprene gasket under the exterior cap will seal against water and direct steam pressure up to 225 psi. It is resistant to oil, gasoline and most chemicals. Made by **Molly Corp.**, 230 N. Fifth St., Reading 5, Pa.

For more details circle NED-1110 K3 on enclosed inquiry slip

REMOTE READING THERMOMETER with Centrigrade-Fahrenheit dial



Temperatures in the range of 68 to 105° F can be read at a remote position with the Tele-Thermometer, an electronic instrument. Dial is calibrated in Centigrade and Fahrenheit scales. Instrument makes use of a sensitive thermistor probe which is at the end of a 6-ft wire encased in a waterproof plastic sheath. Silastic sheath is available for autoclaving of probe and lead. Power is furnished by D-size flashlight battery with average service life of 12 months. Units can be provided on special order for other temperature scales or range, or in multiple channel models with a switching key. Made by **Yellow Springs Instrument Co.**, Xenia Ave., Yellow Springs, O.

For more details circle NED-1111 K3 on enclosed inquiry slip

Belt Conveyors

A complete range of standardized belt conveyors is shown in illustrated catalog No. 76A. Shown are 60-pages of typical conveyor layouts and installation photographs, and standardized drives, takeup, truss, idlers and belting. Shuttle conveyors and stackers illustrate several economical stockpiling systems. Other items included are car unloaders, feeders, hoppers, belt cleaners, magnetic pulleys, walkways, gates, etc. Write on company letterhead to Barber-Greene Co., 400 N. Highland Ave., Aurora, Ill.

For more details circle NED-1112 K3 on enclosed inquiry slip

Roll a NEW Floor OVER the old with

Redi-Roll
Factory Prepared, Heavy Duty Plastic Resurfacer
NO WAITING!
Let Heaviest Traffic Roll Over It Immediately!

Abolish downtime due to floor failures. Just roll *Redi-Roll* over the old floor to a compacted ¼" thickness and USE AT ONCE. It's spark-proof! It's tough! It's industry's best floor buy. Write for details now . . . today!

ROCK-TRED Corporation
Manufacturers of a Complete Line of Building Maintenance Materials
7440-7450 North St. Louis Avenue • Skokie, Illinois
In Canada: Rock-Tred Corporation (Canada) Limited, Toronto 5

For more details circle NED-1113 K3 on enclosed inquiry slip

POWER TRANSMISSION

DESIGNED FOR THE JOB

GIVES GREATER EFFICIENCY

ENGINEERED RIGHT IN YOUR OWN PLANT

Rynel Design-Engineering Service offers all users of **standard** or **special** power reduction units custom-facilities for efficient power application. Rynel engineers will consult with you right in your own plant. As a result of Rynel's exclusive air-lift, this expert assistance on speed reduction problems is available immediately. You are invited to call a Rynel engineer for consultation.

CALL A RYNEL ENGINEER - STerling 4440

He will Visit You The Same Day

MEMBER AGMA

DESIGNERS AND SUPPLIERS
Double Reduction
Right Angle
Parallel Shaft
Shaft Mounted
Speed Reducers and Gearmotors

RYNEL Corporation
312 Miller Street • Sterling, Illinois

For more details circle NED-1114 K3 on enclosed inquiry slip

INTERCHANGEABLE HOLDERS

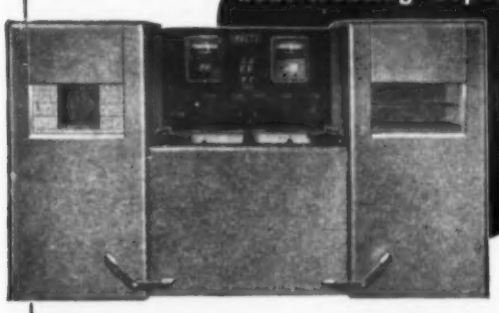
For LIGHT MEDIUM HEAVY Stamping

There's a Matthews interchangeable type holder for every industrial steel stamping application . . . whether your stamping job calls for small, medium or continuous heavy duty marking. Write for complete literature and information.

JAS. H. MATTHEWS & CO.
3943 FORBES ST. • PITTSBURGH 13, PA.
NEW YORK • BOSTON • PHILADELPHIA
CHICAGO • CLIFTON, N. J.

For more details circle NED-1115 K3 on enclosed inquiry slip

Waltz gives you a complete heat-treating department in a single unit



Waltz CH gas fired heat-treating unit gives you all the advantages of a full scale heat-treating department. Designed for heat-treating all types of oil or water hardening steel . . . for heating, quenching and drawing . . . for stress relieving, normalizing and annealing, with controlled atmospheres.

Features include:

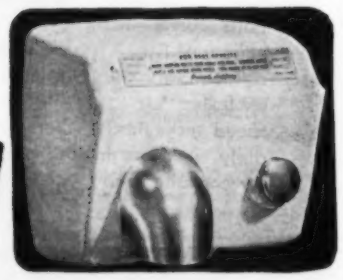
- *Heating Furnace with range of 1000° to 2400° F. automatically controlled (12" wide x 10" high x 18" deep).*
- *Tempering or Drawing Oven is recirculating type. Work is constantly bathed with evenly distributed high velocity and held to constant temperature by automatic control. Alloy steel lined with perforated shelf, has range of 250° to 1100° F. (21" wide x 10" high x 18" deep).*
- *Furnace and Oven doors equipped with foot treadles.*
- *Two Quench Tanks for oil and water. By means of double wall construction, oil tank is entirely surrounded by water for cooling oil, thus producing more uniform quenching.*
- *Automatic electronic type controls.*
- *Shipped ready to install by simply connecting gas and electric power line.*

FREE Engineering bulletins —Waltz Heat-treating Furnace—write: WALTZ FURNACE COMPANY Dept. B, Symmes St., Cincinnati, O.

For more details circle NED-1116 K3 on enclosed inquiry slip

WHAT!

NO BILLS!



Yes, no bills for Towels and Washroom Maintenance
With the perfected, automatic
NATIONAL HAND DRYER
—dries hands completely dry in 20 seconds!

Eliminates the constantly mounting cost of paper towels or towel service—no storage problem, no filling of cabinets, no removal, cleaning and disposal time or attention. No time when clean, sanitary drying service is not available.

Do you really know how much your wash room service is costing you?

One fast-acting, tamper-proof NATIONAL HAND DRYER serves 1½ to 2 wash basins, pays for its cost from actual cash outlays in 12 to 18 months, gives quick, soothing drying service at the touch of a button.

Let us show you an actual example of continuous cost savings with NATIONAL DRYERS over towels. Now Available for Industrial Users—220-volt Single Phase Models.

National Dryer Sales Corporation, Dept. NE3-10, 616 West Adams St., Chicago 6, Ill.
Without obligation, send complete information on National Hand Dryers and example of cost savings.
( ) Also send information on National Hair Dryers.
Name .....
Address .....
City ..... Zone ..... State .....

For more details circle NED-1117 K3 on enclosed inquiry slip

Index to Advertisers

A

A'G'A Div. of Elastic Stop Nut Corp. of America 74
Abart Gear & Machine Co... 47
Abrasive Products, Inc. 39
Ace Plastic Co. 115
Acme Electric Corp. 108
Acme Industries, Inc. 17
Acme Steel Prod. Div. 54
Acromark Co. 12
Acushnet Process Co. 6
Adams, E. P., Co. 5, 19
Aeroquip Corp. 92
Aerovent Fan Co. 106
Aget-Detroit Co. 17
Ahlberg Bearing Co. 55
Air Conversion Research Corp. 104
Aircraft-Marine Products, Inc. 21
Airetool Mfg. Co. 52
Air-Maze Corp. 23
Ajax Engineering Corp. 115
Alan Wood Steel Co. 72
Albion Industries, Inc. 112
Alemite Div., Stewart Warner Corp. 52
Alkon Products Corp. 66
All Metal Bit Co. 64
Allen-Bradley Co. 38
Allied Products Corp. 5
Allied Radio Corp. 20
Allis Chalmers Mfg. Co. 23, 35, 57, 70, 110
Alter, Harry, Co. 63
Aluminum Co. of America..23, 78
Alvey Conveyor Mfg. Co. .. 18
Alvey-Ferguson Co. 120
American Air Filter Co.....43, 51
American Blower Corp. 86
American Chain & Cable Co. 11, 15, 18
American Gage & Machine Co. 93
American Kleer-Vu Plastics, Inc. 21
American Metal Products Co. 70
American Monorail Co. 31
American Pulley Co. 110
American Pullmax Co. 39
American Recording Chart Co. 13
American Society for Metals. 3
American Wheelabrator & Equip. Corp. 27, 59, 74
Ames, B. C., Co. 81
Ampco Metal, Inc. 98
Ampower Products Co. 4
Anderson, V. D., Co. 48
Anti-Corrosive Metal Products Co. 105
Appleton Electric, Co. 80
Arcos Corp. 88
Armour & Co. 67
Armstrong Bray & Co. 23
Armstrong Bros. Tool Co. ... 33
Armstrong Machine Works... 40
Aro Equipment Corp. 25
Arpin, L. G., Co. 4
Art Wire & Stamping Co. ... 15
Askania Regulator Co. 116
Associated Research, Inc. ... 109
Atlantic India Rubber Works, Inc. 10
Atlas Press Co. 29
Aurand Mfg. & Equip. Co... 11
Aurora Equipment Co. 97
Austenal Laboratories, Inc. Microcast Div. 99
Automatic Transportation Co. 14
Avery Adhesive Label Corp. 71

B

Babcock & Wilcox Co., The Tubular Products Div. 105
Bahnson Co. 71
Bakelite Co., Div. of Union Carbide & Carbon Corp. .. 76
Baker Ind. Truck Div. of The Baker-Raulang Co. 43
Bal, William, Corp. 109
Baldwin-Lima-Hamilton Corp. 66
Barber-Colman Co. 73
Barnes & Smith Corp. 3
Barnstead Still & Sterilizer Co. 21
Bar-Ray Products, Inc. 84
Barry Corporation 2
Bassick Co. 25
Baughman Mfg. Co. 109
Bead Chain Mfg. Co. 113
Beaver Art Metal Corp., Advance Scaffold Div. 100
Bellows Co. 41
Bel-Ray Co. 98
Beltraction Co. 57
Benchmaster Mfg. Co. 108
Bendix Aviation Corp. ...16, 102
Bernard Welding Equipment Co. 18
Beverly Shear Mfg. Co. 79
Biddle, James G., Co. 14
Big Joe Manufacturing Co. .. 106
Bil-Jax, Inc. 97
Bin-Dicator Co. 20
Binks Mfg. Co. 99
Black & Decker Mfg. Co. ... 120
Black Diamond Saw & Machine Works, Inc. 16
Black Drill Co. 48
Black & Webster, Inc. 62
Blaw-Knox Div. of Blaw-Knox Co. 87
Bliss, E. W., Co. 105
Bloomfield Mfg. Co. 3
Bokum Tool Co. 104
Bostitch, Inc. 60
Bowser, Inc. 75
Brady, W. H., Co. 44
Brainard Steel Div., Sharon Steel Corp. 7
Breeze Corporations 22, 100
Brown, W. R., Corp. 95
Brown Engineering Co. 15
Brown & Sharpe Mfg. Co. .. 10
Browning Mfg. Co. 2
Brummeler Steel Prod. Corp.. 68
Bruning, Charles, Co. 67
Buck Tool Co. 119
Burgess-Manning Co. 76
Burndy Engineering Co. 103
Buschman, E. W., Co. 10
Bussmann Mfg. Co. 71
Bustin Firm-Grip Grating Corp. 111

C

Calculagraph Co. 67
Caldwell Co. 5
Calumet Steel Castings Corp. 4
Cam Tool Co. 34
Cambridge Wire Cloth Co...31, 74
Carborundum Co. 29, 102
Carpenter Steel Co. 80
Carter Controls, Inc. 5
Central Safety Equipment Co. 71
Chain Belt Co. 20
Challenge Machinery Co. 26
Champion Lamp Works 42
Champion Pneumatic Machinery Co. 34
Chemical Div., Goodyear Tire & Rubber Co. 21
Chicago Eye Shield Co. 106
Chicago Hardware Foundry Co. 64
Chicago Rawhide Mfg. Co. .. 78
Chicago Thrift-Etching Corp. 85
Chicago Tramrail Corp. 10
Chicago Watchclock, Div. Great Lakes Industries ... 34
Chicago Wheel & Mfg. Co. .. 94
Chisholm-Moore Hoist Div. .. 9
Cincinnati Electrical Tool Co. 14
Cincinnati Shaper Co. 102
Clark Bros. Bolt Co. 14
Clark Controller Co. 66
Clark & Sawyer, Inc. 2
Clearing Machine Corp. 96
Cleveland Cap Screw Co. 33
Cleveland Crane & Engineering Co. 30, 95
Cleveland Vibrator Co. 87
Cleveland Worm & Gear Co.. 107
Climax Molybdenum Co. 6
Coated Coils Corp. 52
Cochrane Corp. 29
Colonial Rubber Co. 44
Colorado Fuel & Iron Corp.. .....14, 21, 95, 106
Colson Corp. 73
Columbia Electric Mfg. Co... 93
Commander Mfg. Co. 44
Commercial Shearing & Stamping Co. 46
Continental-Diamond Fibre Co. 91
Continental Tool Works, Div. Ex-Cell-O Corp. 76
Conveyor Specialty Co. 87
Convoy, Inc. 45
Cordomatic Div., Vacuum Cleaner Corp. of Amer. .. 79
Corning Glass Works 101
Cover, H. S. 8
Cramer, R. W., Co. 72
Crane Co. 41
Crane Packing Co. 47
Crystal Tissue Co. 104
Cullen-Friestedt Co. 93
Cummins-Chicago Corp. 57
Cuno Engineering Corp. 109

D

Dart Union Co. 58
Davenport, A. C., & Son, Inc. 11
Dayton Rogers Mfg. Co. 18
DeLaval Steam Turbine Co.. 94
Deming Company 63
Denison Engineering Co. 86
Derby Sealers, Inc. 7
Detroit Hoist & Machine Co. 77
Detroit Power Screwdriver Co. 72
Detroit Stamping Co. 114
Dialight Corp. 63
Diamond Chain Co. 82
Diamond Products, Inc. 5
Dietzgen, Eugene, Co. 75
Dillon, W. C., & Co. 52
Dings Magnetic Separator Co. 16
Dixon Automatic Tool, Inc.. 59
Dixon Valve & Coupling Co.. 87
Dodge Mfg. Corp. 22
Doepke, Chas. Wm., Mfg. Co. 83
Downs Crane & Hoist Co. ... 12
Dravo Corporation 60
Driv-Lok Pin Co. 65
Dudco Div., N. Y. Air Brake Co. 6
Duff-Norton Mfg. Co. 3
duPont de Nemours, E. I., & Co. 42, 74
Durant Mfg. Co. 102

E

Eastman Kodak Co. 43, 91
Eaton Mfg. Co., Reliance Div. 19
Eclipse Machine Div., Bendix Aviation Corp. 16
Edgemont Machine Co. 56
Edmont Mfg. Co. 62
Edmund Scientific Corp. ..19, 120
Elastic Stop Nut Corp. of America 74, 107
Electric Controller & Mfg. Co. 34
Electric Hotpack Co. 4
Electric Switch Corp. 58
Elox Corp. of Michigan 111
Elwell-Parker Electric Co. .. 63
Emerson Electric Mfg. Co. .. 113
Enterprise Machine Parts Corp. 28
Equipto, Div. Aurora Equipment Co. 97
Erico Products, Inc. 33, 103
Essex Wire Corp. 37, 81
Evis Mfg. Co. 84
Exacto Industries, Inc. 84
Ex-Cell-O Corp. 31, 76
Explosives Dept., E. I. du Pont de Nemours & Co. .. 74

F

Faber, A. W.—Castell Pencil Co. 37
Fafnir Bearing Co. 51
Fairbanks, Morse & Co. 25
Farmers Engineering & Mfg. Co. 100
Farquhar, A. B., Div. Oliver Corp. 83
Farrelloy Co. 120
Federal Press Co. 115
Federal Products Corp. 21
Felt Products Mfg. Co. 103
Felters Co. 83
Ferguson, Harry J., Co. 97
Fibre Specialty Mfg. Co. ... 75
Fielden Instrument Div., Robertshaw-Fulton Controls Co. 95
Filmsort, Inc. 66
Fisher & Norris 76
Flash Box Opener Co. 91
Flexrock Co. 17, 120
Foley Mfg. Co. 105
Foote Bros. Gear & Machine Corp. 78
Ford, M. A., Mfg. Co. 87
Formsprag Co. 59
Fort Worth Steel & Machinery Co. 99
Foster Mfg. Co. 31
Foster Supplies Co. 81
Fostoria Pressed Steel Corp.. 27
Foxboro Co. 5
Franklin Balmar Corp. 90
Fuller Co. 63

G

Gairing Tool Co. 3
Galland-Henning Mfg. Co. .. 65
Gardner Machine Co. 62
Garland Mfg. Co. 85
Gast Mfg. Corp. 12
General Box Co. 27
General Electric Co. 13, 48, 68, 89, 99
General Fittings Co. 78
General Photo Products Co... 50
General Plate, Div. Metals & Controls Corp. 15
General Radio Co. 42
General Scientific Equipment Co. 9
General Tire & Rubber Co... 17
Geroter May Corp. 52
Gerrard Steel Strapping Div. United States Steel Co. ... 30
Globe Co., Grip-Strut Div. .. 41
Goggle Parts Co. 81
Goodrich, B. F., Co. 11
Goodyear Tire & Rubber Co. 21
Gorton, George, Machine Co. 108
Gotham Instruments Div. Amer. Machine & Metals .. 16
Gould, J. D., Co. 117
Graham Transmissions, Inc.. 69
Grammes, L. F., & Sons ... 96
Greenlee Tool Co. 116
Gries Reproducer Corp. 109
Grinnell Co. 30
Groov-Pin Corp. 101
Grove Machine Works 113
Guardian Electric 114

H

Hallemite Mfg. Co. 25
Hamilton Tool Co. 80
Hammond Machinery Builders, Inc. 103
Hanchett Magna-Lock Corp... 53
Handy & Harman 38
Hanna Engineering Works.27, 107
Hannifin Corp. 59
Hansen, A. L., Mfg. Co. 39
Harper, H. M., Co. 76
Harris-Barrier, Inc. 58
Hart Mfg. Co. 84
Heinrich Tools, Inc. 47
Hein-Werner Corp. 65
Herman, Karl A., Co. 16
Hetherington & Berner Inc... 16
Hill Acme Co. 53
Hilliard Corp. 49
Hills-McCanna Co. 28
Hobbs Mfg. Co. 27, 72
Hoffman Co. 105
Homer Manufacturing Co. ... 10
Homestead Valve Mfg. Co. .. 57
Honan-Crane Corp. 60, 61
Hoover Ball & Bearing Co. .. 62
Houghton, E. F., & Co. 96
Hudson Bay Div., Refrigeration Systems, Inc. 5
Hunt, C. B., & Son, Inc. ... 79
Hydreco Div., New York Air Brake Co. 97
Hydroway Scales, Inc. 13

I

Illinois Testing Laboratories, Inc. 29, 74
Industrial Products Co. 36
Industrial Retaining Ring Co. 47
Industrial Tape Corp. 9
Ingersoll-Rand Co. 64
Insul-Mastic Corp. of America 28
International Staple & Machine Co. 107
Interstate Rubber Products Corp. 2
Invincible Vacuum Cleaner Mfg. Co. 42
Ironbound Box & Lumber Co. 32
Irvington Varnish & Insulator Co. 86

J

Jabsco Pump Co. 70
James, D. O., Gear Mfg. Co. 73
James-Pond-Clark 20
Jefferson Electric Co. 33
Jeffrey Mfg. Co. 30
Jelliff, C. O., Mfg. Corp.... 90
Johns-Manville 37
Johnson Bronze Co. 67
Johnson Mfg. Corp. 69
Jones, C. Walker, Co. 46
Jones, Howard B., Div., Cinch Mfg. Corp. 89
Judsen Rubber Works, Inc... 96

K

Kalamazoo Tank & Silo Co., Machine Tool Div. 35
Kano Laboratories 35
Kant-Slam Door Check Co... 3
Keller Tool Co. 26, 59, 80
Kellogg Div., American Brake Shoe Co. 49
Kendall Controls Corp. 55
Kent Co. 8
Kester Solder Co. 51
Kett Tool Co. 104
Key Company 116
Koiled Kords, Inc. 87
Krieg, Victor J., Inc. 88

L

Lake Chemical Co. 24
Lake Shore Engineering Co... 109
Lamson Corp. 89
Lapeer Mfg. Co. 112
Laughlin, Thomas, Co. 55
Leiman Bros., Inc. 55
Lempco Products, Inc. 108
Leonard Precision Products Co. 46
Lepel High Frequency Laboratories, Inc. 65
Lewis-Shepard Products, Inc. 86
Lewis Welding & Eng. Corp. 99
Libbey • Owens • Ford Glass Co. 18
Lift Trucks, Inc. 33, 74
Lindberg Engineering Co. ... 88
Linde Air Products Co. A Div. of Union Carbide & Carbon Corp. 17, 55, 83
Link-Belt Co. 23, 37
Lion Fasteners, Inc. 64
Logan Co. 4
Logan Engineering Co. 13
Logansport Machine Co. 108
Loomis Machine Co. 82
Lovejoy Flexible Coupling Co. 26

M

M B Manufacturing Co. 12
Maas & Waldstein Co. 68
Magline, Inc. 54
Magnesium Co. of America.. 61
Mall Tool Co. 60
Manheim Mfg. & Belting Co. 100
Marvellum Co. 114
Masonite Corp. 75
Mason-Neilan Regulator Co.. 18
Mateer, G. Diehl, & Co. 14
Mathews Conveyer Co.....60, 61
Mathewson Machine Works .. 50
Matthews, Jas. H., & Co. ... 118
May-Fran Engineering, Inc... 73
McCord Corp. 99
McGill Mfg. Co. 43, 70
Mead Specialties Co. 77
Mechanical Handling Systems, Inc. 117
Mercoid Corp. 43
Merrill Brothers 56
Metal & Thermit Corp. 114
Metals & Controls Corp. ...15, 51
Metzgar Co. 79
Meyers, W. F., Co. 67
Micro, Div. of Minneapolis-Honeywell Regulator Co. .. 81
Micrometrical Mfg. Co. 98
Mid-States Welder Mfg. Co... 60
Mill-Rose Co. 44
Milton Roy Co. 89
Milwaukee Dustless Brush Co. 40
Mine & Smelter Supply Co... 45
Minneapolis-Honeywell Regulator Co. 81
Minnesota Mining & Mfg. Co. 54
Mitts & Merrill 116
Mixing Equipment Co. 32
Modern Machine Tool Co. ... 24
Modernair Corp. 110
Monarch Rubber Co. 97
Morris Machine Works 83
Morse Mfg. Co. 79
Mortell, J. W., Co. 120
Morton Machine Works 61
Moto-Truc Co. 57
Mueller Brass Co. 48
Multi-Clean Products, Inc. .. 85
Multistamp Co. 12
Mystik Adhesive Products... 82

N

National Cylinder Gas Co. .. 22
National Dryer Sales Corp... 118
National Screw & Mfg. Co... 22
National Vulcanized Fibre Co. 18
Naylor Pipe Co. 8
New Hermes, Inc. 101
New Jersey Machine Corp. .. 43
New York Air Brake Co....6, 97
N. Y. Belting & Packing Co. 39
New York Blower Co. 112
Newage International, Inc. .. 112
Newark Wire Cloth Co. 19
Niagara Blower Co. 29
Nicholson, W. H., & Co. 117
Nicholson File Co. 79
Northern Engineering Works. 104
Norton Co. 72
Nu-Matic Grinders, Inc. 35

O

OPW Corp. 54
Oberdorfer Foundries, Inc. Ind. Pump Div. 24
Ohio Brass Co. 77
Ohio Gear Co. 71
Ohmite Mfg. Co. 15
Oilgear Co. 35
Oliver Corp., A. B. Farquhar Div. 83
Olson, Samuel, Mfg. Co. 119
Omicron Co. 3
O'Neil-Irwin Mfg. Co. 64
Orr & Sembower, Inc. 92
Osborn Mfg. Co. 88
Owatonna Tool Co. 54
Ozalid Div. of General Aniline & Film Corp. 47

P

Pabco Products, Inc. 103
Pacific Coast Div., Colorado Fuel & Iron Corp. 14, 21, 95, 106
Page Steel & Wire Div. 11
Palley Supply Co. 11
Palmer, Harold L., Co. 116
Palmer-Shile Co. 86
Palnut Company 28
Paltier Corp. 26
Panalarm Products Inc. 68
Pangborn Corp. 77
Patterson Foundry & Machine Co. 37
Peck & Harvey 32
Penetone Co. 7
Penn Metal Corp. of Penn'a.. 111
Pennsylvania Flexible Metallic Tubing Co. 62
Pereny Equipment Co. 10
Permacel Tape Corp. 9
Pfaudler Co. 45
Pheoll Mfg. Co. 6
Phillips Mfg. Co. 9
Photoswitch Inc. 36
Pike, E. W., & Co. 48
Pines Engineering Co. 64
Pittsburgh Plate Glass Co. .. 53
Pittsburgh Steel Products Co. 49
Pneu-Trol Devices, Inc. 40
Polyken Industrial Tapes, Dept. of Bauer & Black... 65
Polymer Corp. of Penna. ... 48
Portable Electric Tools, Inc.. 54
Portage Double-Quick Tool Co. 107
Porter-Cable Machine Co. ... 97
Powers Regulator Co. 25, 101
Precise Products Corp. 45
Preformed Line Products Co. 6
Presstite Engineering Co. ... 81
Procunier Safety Chuck Co... 37
Production Instrument Co. .. 24
Progressive Mfg. Co. 68
Progressive Tool & Die Co... 66
Propellair Div., Robbins & Myers, Inc. 111
Protective Closures Co. 2
Pull-Gear Co. 9

Q

Quadriga Manufacturing Co.. 25
Quaker Rubber Corp. Div. H. K. Porter Co. 58
Quick-Shear Wheel Co. 4
Quincy Compressor Co. 69

R

R-B-M Div., Essex Wire Corp. 37
RCS Tool Sales Corp. 95
Rampe Manufacturing Co.... 7
Randall Graphite Bearings, Inc. 29
Raymond Corp. 35, 98
Refrigeration Systems, Inc., Hudson Bay Div. 5
Reliance Div., Eaton Mfg. Co. 19
Reliance Electric & Engrng. Co. 41
Remington Rand, Inc. 80
Republic Rubber Div. Lee Rubber & Tire Corp. 93
Reznor Mfg. Co. 40
Richard Brothers Punch Div., Allied Products Corp. 5
Richards, J. A., Co. 57
Ridge Tool Co. 20
Robbins, Omer E., Co. 34
Robbins & Myers, Inc. 111
Roberts, Weldon, Rubber Co. 24
Rochester Manufacturing Co. 56
Rockford Clutch Div. Borg-Warner 19
Rock-Tred Corp. 117
Rockwell Mfg. Co. 85
Rockwood Sprinkler Co....26, 69
Rodgers Hydraulic, Inc. 103
Roller Bearing Co. of America 12
Rolock, Inc. 31, 82
Roper, Geo. D., Corp. 101
Rotary Lift Co. 49
Roto-Finish Co. 22
Rubber Chemicals Div., E. I. duPont de Nemours & Co.. 42
Ruberoid Co. 19
Ruby Chemical Co..... 44
Ruemelin Mfg. Co. 56
Russell & Stoll Co. 115
Rynel Corp. 13, 117

S

Sabin Machine Co. 91
Safety Belt-Lacer Co. 62
Sarco Co. 8
Sarkes Tarzian, Inc. 39
Scheu Products Co. 28
Schrader's, A., Son 33, 70
Schramm, Inc. 50
Schutte & Koerting Co. 53
Scintilla Magneto Div. Bendix Aviation Corp. 102
Sellstrom Mfg. Co. 94
Service Caster & Truck Corp 115
Service Machine Co. 38
Severance Tool Industries ... 6
Sexauer, J. A., Mfg. Co. 41
Shakeproof, Inc. 42
Sheldon Machine Co. 96
Shenango-Penn Mold Co. .. 94
Shepard Niles Crane & Hoist Corp. 38
Simplex Time Recorder Co.. 114
Simplicity Engineering Co. . 30
Size Control Co. Div. Amer Gage & Machine Co. 93
Skinner Electric Valve Div. Skinner Chuck Co. 51
Sly, W. W., Mfg. Co. 34
Smead Mfg. Co. 7

Advertisers Index—Continued

...oth-On Mfg. Co. 77
...-Tite, Inc. 110
...ner Metalcraft Corp. ... 53
...h Bend Lathe Works 47
...lding Fibre Co. 51
...l Selector, Inc. 73
...dway Mfg. Co. 93
...cer Thermostat Div. Metals & Controls Corp.... 51
...cer Turbine Co. 36
..., Inc. 32, 75
...gue Electric Co. 92
... Engineering Co. 105
...ing Systems Co. 71
...g Packing Corp. 48
...e D Company.........23, 78
...bin Corp. 27
...pole Carbon Co. 77
...ard Conveyor Co. 63
...ard Electrical Tool Co.. 102
...ard Pressed Steel Co. 30, 61, 91
...ey Works, The 36
...-Kimble Motor Div., ...hle Printing Press & ...g. Co. 56
...-Warm Electric Co. 20
...ns Magnetic, Inc. 120
...ens-Adamson Mfg. Co.. 8, 9
...rt Warner Corp., Ale-...e Div. 52
..., Herman H., Co. 8
...ard Co. 119
...d, N. A. Div., Franklin ...mar Corp. 90
...ers Wells Corp. 106
...y Broaching Service ... 17
...vant Mill Co. 113
... Beet Products Co. 40
...an-Becker Co. 52

Sunnen Products Co. 100
Superior Tube Co. 65
Surety Rubber Co. 84
Sutton Mfg. Corp. 13
Swartwout Co. 31
Synthane Corp. 32

T

Taber Instrument Corp. 28
Taylor-Winfield Corp. 85
Tempil Corp. 116
Tempo Products Co. 58
Thermo Electric Mfg. Co. ... 7
Thomas Associates 3
Thomas & Betts Co. 66
Thomas Truck & Caster Co.. 50
Thompson Electric Co. 73
Tilden Tool Mfg. Co. 80
Tile-Tex Div., Flintkote Co... 56
Titchener, E. H., & Co. 101
Tokheim Oil Tank & Pump Co. 114
Toledo Pipe Threading Machine Co. 15
Toledo Scale Co. 46
Tolerton Co. 110
Tomkins-Johnson Co. 70
Torrington Co. 11
Tower, A. J., Co. 45
Towmotor Corp. 113
Transall, Inc. 92
Transeal, Ltd. 98
Tranter Mfg., Inc., Platecoil Div. 53
Tri-Saw Corp. 112
Tropical Paint & Oil Co. 82
Truck-man Div. of Knickerbocker Co. 93
Trumbull Dept., General Electric Co. 99

Truscon Steel Div., Republic Steel Corp. 50
Turner Uni-Drive Co. 9
Turnomat Co. 56
Tuthill Pump Co. 45
Twin Disc Clutch Co. 12

U

Union Carbide & Carbon Corp., Bakelite Co. 76
Union Carbide & Carbon Corp., Linde Air Products Co. 17, 55, 83
Union Metal Mfg. Co...60, 61, 85
Union Tool Corp. 36
Unistrut Products Co. 89
United Electric Controls Co.. 95
United Laboratories, Inc. ... 8
U. S.-Burke Machine Tool Div. 38
U. S. Electrical Motors, Inc.. 49
United States Electrical Tool Div. Emerson Electric Mfg. Co. 113
United States Gasket Co. ... 40
U. S. Hoffman Machinery Corp. 88
U. S. Safety Service Co. 46
United States Steel Corp. ..30, 49
U. S. Stoneware Co. 89
Universal Engineering Co. ... 38

V

Valvair Corp. 2
Varflex Corp. 108
Veeder-Root, Inc. 107
Vulcan Electric Co. 94
Vulcan Tool Co. 83

W

Waltz Furnace Co. 118

Ward Leonard Electric Co. .. 18
Warner Electric Brake & Clutch Co. 67
Waterloo Valve Spring Compressor Co. 51
Watlow Electric Mfg. Co. ... 111
Wayne Pump Co. 14
Webb, Jervis B., Co. 7
Webber Manufacturing Co... 69
Weber Addressing Machine Co. 106
Weckesser Co. 44
Wedge-Wire Corp. 61
Wells Mfg. Corp. 42
West Bend Equipment Corp.. 96
West Point Mfg. Co. 50
Western Lithograph Co. 92
Westinghouse Electric Corp. 22, 39, 59, 90
Weston Electrical Instrument Corp. 55
Wheeler Insulated Wire Co... 32
Wheeler Protective Apparel, Inc. 58
Wheeler Reflector Co......... 91
White, S. S., Dental Mfg. Co. 26
Wickwire Spencer Steel Div. 14, 21, 95, 106
Wiegand, Edwin L., Co. ...4, 69
Wing, L. J., Mfg. Co. 104
Wire Rope Sling Dept. Amer. Chain & Cable 15
Worthington Corp. 24, 75
Wright Hoist Div., Amer. Chain & Cable 18

Y

Yarnall-Waring Co. 46

Z

Zallen Brothers 41

Index to Products

A

...ive Products 22, 24, 29, 39, ...59, 62, 67, 72, 94, 100, 102
...ive, Fuel Oil 96
...ives 21, 107, 113
...onditioning 74, 78
...ads 20
..., Special Purpose 110, 112, 120
...num Products 100
... . 76

B

... .17, 62
...rs, Parking 58
...s 105
...gs .... 4, 8, 12, 19, 25, 29, ...47, 51, 55, 67, 94, 110, 116
...s 100, 116
... Fasteners 23, 62, 120
... . 100
..., Conveyor 95
... Treatment 57
...s 35, 46, 57, 64, 116
... Boxes ....3, 5, 27, ...45, 51, 60, 61, 83, 85, 109
... & Crates, Wooden ... 27
... .67, 97, 120
...g Materials 38, 83, 105, 114
...ing Equipment 18
...s 40, 44, 53, 88
...g Materials ..19, 68, 101
...gs, Industrial 61
...n Boards 11
...gs, Drill 38

C

...s, High Speed 91
...tors 57
... & Plugs, Tubing 2, 9
... Spotter 37
... Products 77, 106
... & Chests 51
... .25, 73, 112, 115
...gs 94
... .20, 82, 98, 113, 115
... . 119
...ing Devices .... 2, ...4, 45, 76, 84, 92, 103, 114
...s, Lifting 1, 12, 56, 59
...rs, Air 5, 18, 19, 59
...rs, Drain 113
...rs, Vacuum 8, 36, 42, 89
...ng Equipment, Blast 7, 34, 40, 56, 77
...ng Machines 70
...ng Machines, Parts 9, 20, 76
...ng Materials 7, 9
...es 19, 56, 59, 112
...gs, Protective .... 28, ...103, 105, 109, 111, 113, 115
...unications Equipment 32, 39, 58, 100
...ressors, Air 14, 34, 49, 50, 64, 69, 95
...nsate Systems 29
...nsation Preventive 120
...ols, Air & Hydraulic ..2, 3, ...11, 20, 33, 40, 46, 51, 55, ...65, 70, 76, 79, 107, 108, 110
...ols, Bin Level 20
...ols, Electric .... 34, ...44, 48, 53, 58, 62, 66, 70, ...78, 80, 81, 84, 91, 110, 115
...rols, Level 36, 95
...rols, Pressure 18
...rols, Remote ... 113
...rols, Pressure & Temperature .... 16, 25, ... 74 84, 95, ...
...veyor Accessories ... 9, 18, ...
...veyors ... 61, 63, ... 106, 10... 120
...lant ... 104
...ntin... 107
...pli... 26
...ne ... 49
...r 108, 112
... ... 102
...tters, ... 57
... ... 75
...n... ...ulic ..5, ...11, 27, ... 77, 110

D

... ...22, 46
... ... 6
... ...1, 98, 114
... ..., 82, 104
Door Operators ...3, 64
Doors, Industrial ... 73

Drafting Equipment 3, 37, 67, 75
Dressers, Wheel 5
Drill Heads, Adjustable ...24, 44
Drilling Machines 36, 48, 66, 72, 111, 116
Drills 3, 51, 80
Drives, Machine 1, 9, 12, 78, 86, 94
Drives, Variable Speed ..9, 15, 22, 24, 41, 42, 69, 73, 100, 110
Drying Equipment 21
Dust Collectors 17, 32, 39, 51, 74, 77, 83, 112

E

Electric Plants 72, 108
Electronic Equipment 20, 28, 60, 82, 84, 92, 106, 108, 110, 116
Elevating Equipment 5, 8, 30, 49, 98, 106
Engines, Diesel & Gasoline 64, 65, 104
Engraving Machines 101, 108
Envelopes, Transparent 21

F

Fans & Blowers 13, 98, 99, 106, 111
Fastening Devices 1, 6, 14, 19, 22, 28, 33, 42, 47, 56, 61, 64, 65, 68, 72, 74, 76, 81, 83, 91, 94, 100, 101, 102, 105, 106, 107, 108, 109
Faucet Repairs 41
Feeders 72, 78
Felt Products 48
Fences 3, 11
Files 79, 98
Filtering Equipment 5, 16, 18, 23, 38, 49, 60, 61, 75, 88, 108, 109, 114
Finishes 68, 82, 103
Finishing Equipment, Blast 27, 77
Finishing Equipment, Spray 49, 52, 105
Fire Extinguishing Equipment 69
Flexible Shaft Machines 90, 93, 100
Floor Machines 4, 85
Flooring Materials ..8, 41, 56, 60, 72, 87, 103, 111, 117, 120
Forgings 48
Foundry Equipment 12
Furnaces, Industrial 10, 56, 88, 115, 118
Fuses 71
Freezers, Industrial 69

G

Gages, Precision 21, 34, 69, 81, 82, 85, 93, 97, 100
Gages, Pressure & Temperature 47, 52
Gearing 13, 67, 71, 73
Generators, Steam 2, 44, 92, 100
Glare Preventive 98, 109
Glass Products 18, 101
Gloves, Industrial 46, 62, 84, 102
Goggles 46, 49, 94
Grinders, Tool & Cutter 16
Grinding Accessories 35
Grinding Machines 14, 62, 102, 103

H

Hammers & Mallets 78, 85
Hardboard 75
Heat Exchangers 1, 17, 19, 29, 45, 49, 53, 84, 106
Heat Treating Equipment ... .12, 16, 94, 110, 116, 118
Heaters, Compound 20, 116
Heaters, Electric 2, 4, 7, 39, 69, 111, 112
Heaters, Induction ..19, 65, 115
Heaters, Unit 1, 28, 40, 43, 58, 65, 84, 91, 99, 104, 112
Heaters, Water 78
Hoists 9, 25, 38, 77, 80, 83, 88
Honing Equipment 31, 100
Hose & Fittings 22, 31, 39, 54, 58, 62, 80, 84, 87, 92, 93, 99, 110, 116
Humidifying Equipment 40, 71

I

Ice Control Equipment 109
Indicators, Pressure & Temperature 116
Inspection Equipment 8, 19, 23, 48, 54, 86, 120
Insulation, Electric 36, 86, 101, 108

J

Jacks 3, 65
Jacks, Leveling 28
Jigs & Fixtures 50, 61, 87, 100
Joints, Rotating 71

K

Keyseater 10
Knee Pads 96
Knobs 43

L

Labels 44, 71, 92, 99
Laminated Materials ..15, 32, 91
Lighting Equipment 1, 7, 27, 42, 53, 70, 79, 80, 91, 112
Lights, Pilot 63
Lockers & Shelving 111
Lubricants 6, 35, 98, 113
Lubricating Equipment 26, 29, 32, 37, 49, 52, 59, 76

M

Machine Tools 1, 13, 29, 31, 38, 47, 96, 102
Machine Tool Accessories ..4, 17, 18, 24, 26, 34, 50, 53, 56, 107
Magnetic Equipment 10, 16, 21, 79, 86
Marking Equipment 12, 24, 44, 84, 101, 106, 111, 118
Materials Handling Equipment 1, 12, 26, 32, 37, 42, 49, 51, 56, 59, 60, 61, 66, 75, 77, 86, 105, 109
Materials Handling, Overhead 10, 25, 31, 106
Mats, Floor 107, 113
Meters, Flow 16, 60, 75, 85, 88, 93, 104, 114
Meters, Tong Test 93
Mixing Equipment 5, 32, 37, 41, 79, 113
Motors, Electric 48 49, 50, 56, 90, 96, 112

N

Name Plates 85, 96
Nozzles, Spray 71, 105

O

Office Equipment 7, 11, 66, 72, 80, 96
Opener, Box 91
Ovens, Industrial 4

P

Packaging Equipment & Materials 7, 14, 25, 53, 63, 104, 114
Packings & Gaskets 37, 40, 42, 44, 48, 102
Parking Systems 110
Parts, Precision 11, 25, 99
Photoelectric Equipment 93
Pipe & Fittings 8, 16, 41, 58, 82, 96, 114
Pipe Joint Compound ...103, 116
Pipe Tools & Machines 15, 20, 34
Plastics 32, 48, 76, 86, 87, 114, 115, 120
Plating Equipment 99, 116
Plows, Snow 36
Power Units, Hydraulic 6, 11, 35, 46, 52, 77, 97
Press Brakes 4, 75, 102
Presses, 7, 13, 30, 62, 64, 86, 91, 96, 103, 105, 108, 114, 115
Presses, Briquetting 32
Presses, Molding 90, 99
Printing Presses 29
Process Equipment 2, 13, 41, 70, 82, 106
Production Facilities 38, 116
Pullers 21, 54, 65
Pulleys & Sheaves 57, 100
Pulverizers 30
Pumps 6, 16, 24, 45, 63, 67, 70, 78, 83, 101, 110, 114
Pumps Chemical 23, 89
Pumps, Vacuum 12, 43, 55, 63, 64
Punches 5, 42, 59
Pyrometers 68

R

Racks ..15, 20, 26, 55, 70, 89
Recorders 16, 60, 63, 114
Rectifiers 39
Reels, Cord 79, 80
Refrigeration Equipment 63
Regulators, Voltage 35, 48
Relays 37, 74, 114
Reproduction Equipment 32, 43, 47, 48, 50, 61, 66, 75, 80
Resistors 15, 55, 90
Respirators 8, 81
Rheostats 18
Riveting Equipment 70
Roofing Materials ..50, 115, 119
Rubber Products 10, 104
Rubber, Synthetic 42, 114
Rust Preventive 103, 111, 114

S

Safety Equipment 4, 9, 36, 45, 58, 64, 77, 92, 101, 106
Saw Blades 104
Saw Sharpener 105
Saws, Metal & Wood 10, 26, 34, 35, 42, 69, 88, 95, 104, 112
Scaffolding 31, 51, 97, 100
Scales 13, 22, 25, 46
Screening Equipment ..7, 61, 73
Screwdriver 64
Screwdriver, Power 72
Seals 47, 81, 89
Shears 6, 31, 36, 38, 39, 79
Shop Equipment 30, 68, 97, 110
Shredders 116
Signals 68
Slings 5, 6, 15, 21, 31
Slitters 27
Soldering Equipment & Materials ..9, 28, 44, 51, 94, 120
Speed Reducers 9, 22, 47, 71, 90, 107, 117
Spray Equipment 71, 105
Spreaders, Compound 106
Springs 71
Sprockets 2, 82, 98
Stampings 15, 25, 104, 107
Stapling Equipment 60, 107
Static Eliminators 8
Strainers 30
Strapping, Steel, 7, 24, 30, 36, 54
Strip, Prefinished Metal 52

T

Tacker, Hand 39
Tachometers 108
Tanks 27
Tape, Industrial ..9, 54, 65, 82
Tapping Machines 36, 37, 80
Telephone Booths, Acoustic .. 76
Testing Equipment 5, 14, 15, 22, 23, 28, 29, 33, 46, 47, 50, 52, 66, 69, 81, 92, 98, 109, 112, 120
Thermometers ..16, 55, 56, 117
Timing Devices 17, 63, 67, 72, 102, 114, 116
Tires, Industrial 11, 17, 97
Tissues 104
Tools, Cleaning 11
Tools, Cutting 4, 6, 10, 33, 62, 76, 80, 87, 104, 107
Tools, Hand 79
Tools, Pneumatic ..26, 57, 68
Tools, Portable Electric 45, 54, 57, 58, 82, 93, 97, 98, 108, 113, 120
Trailers 50, 59
Transformers 1, 17, 33, 59, 108
Traps 8, 46, 48, 87, 117
Trolleys 7, 23, 31
Trucks, Hand 31, 74, 86, 91, 94, 96
Trucks, Industrial Power 1, 14, 26, 33, 35, 36, 43, 52, 55, 57, 63, 86, 89, 93, 108, 113
Tube Fabricating Equipment.. ....14, 46, 52, 64
Tubing & Fittings 23, 64, 65, 67, 78, 80, 98, 110, 114
Turbines 94

V

Valves 5, 24, 26, 28, 30, 41, 43, 45, 57, 77, 92, 117
Ventilating Equipment 31
Vibration Absorbers 2, 12, 28, 73, 83
Vibrating Equipment 75, 87
Vises 47, 53, 66, 90, 95

W

Washers 25, 72
Washroom Equipment 40, 64, 90, 118
Watchclocks 34
Water Treatment 21, 84, 98
Waterproofing Material ..17, 116
Welders, Electric 4, 22, 46, 55, 60, 81, 85, 90, 98
Welding Accessories 18, 23, 33, 75, 86, 88, 93, 105, 106, 113, 114, 115
Welding & Cutting, Gas 83
Wheels, Industrial 9, 40, 102, 110
Winches 43
Wire Cloth & Screens 14, 19, 74
Wire, Electric 81, 106
Wire Rope & Accessories ..6, 55
Wire Specialties 15, 53, 101, 104
Wiring Accessories 13, 21, 40, 45, 66, 81, 87, 89, 96, 102, 104, 115
Wrenches 35, 38, 112

SUMMER'S BLISTERING HEAT . . . THEN

SUDDEN ROOF LEAKS!

NOW IS THE TIME TO PROTECT YOUR ROOF WITH

STONHARD ROOF RESURFACERS

Before Winter Sets In

STONHARD PLASTIC ROOF RESURFACER seals leaks around skylights, gutters and parapets, just trowel it on. STONHARD LIQUID ROOF RESURFACER rejuvenates dried out areas, restores elasticity and provides a one-piece covering that resists the elements. There's no heating, no mixing, STONHARD ROOF RESURFACERS are applied right from the container—to any type roof. Write today for our free ROOF RESURFACER booklet. It can save you money.

STONHARD COMPANY

Building Maintenance Materials Since 1922

101 Stonhard Bldg., 1306 Spring Garden Street, Phila. 23, Pa.

Yes, I want details on STONHARD ROOF RESURFACERS 101/10/53

Name ....

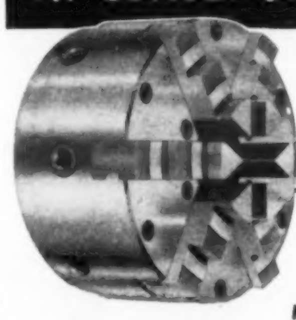
Company .... Title ....

Address ....

City .... Zone ...... State ....

For more details circle NED-1118 K3 on enclosed inquiry slip

.0005" PRECISION CHUCKING AT SCROLL CHUCK SPEED!



RECHUCK TO .0005" ON DUPLICATE PARTS WITHOUT FURTHER ADJUSTMENT!

$44.00 TO $250.00

F.O.B. KALAMAZOO

3-Jaw and 6-Jaw Models Available in 4", 5", 6", 7½", and 9" Diameters. 2-Jaw Aviation Chucks Also Available in 6", 7½", and 9" diameters.

The time, labor, and equipment costs you can save with a Buck Ajust-Tru chuck are little short of amazing. It lines up dead true *in less than a minute!* Rechucks duplicate parts *within .0005" at scroll chuck speeds!* Ends most needs for collets, step collets, stub arbors, mandrels, special fixtures. Adapts to lathes, screw machines, dividing heads. *Often doubles, triples output.* Get the *full* story. Send today for latest catalog.

BUCK TOOL COMPANY

1022 SCHIPPERS LANE • KALAMAZOO, MICH.

NEW 4-JAW INDEPENDENT CHUCK WITH GREAT NEW MACHINING ADVANTAGES!

Most chucks for 9" to 16" lathes are either too light and cheaply made to hold work securely, or too heavy for the lathe and clumsy to handle. Here's the chuck with the ideal weight—providing much more "holding power" and eliminating ⅝" overhang to improve accuracy, permit heavier cuts. 6", 8", and 10" models available. Send for latest catalog.

For more details circle NED-1119 K3 on enclosed inquiry slip

Move cartons, boxes, pans, crates, sheets without effort. Gravity does the work. Light in weight, easy to set up, easy to move.

Adaptable. Straight lengths and reversible, curved sections—adjustable stands and quick couplers. Many handy accessories for adapting conveyors to your job.

Send for Catalog and case histories.

SAMUEL OLSON MFG. CO., INC.

2423 Bloomingdale Ave., Chicago 47, Ill.

Please send literature—

☐ Bulletin on Wheel Conveyors and Pallet Dollies

☐ Literature on OLSON Conveyors for every purpose

Individual ________ Title ________

Street ________

City ________ Zone ____ State ________

For more details circle NED-1120 K3 on enclosed inquiry slip

stop coasting, *add output*

with STEARNS MAGNETIC DISC BRAKES

Stopping motors quickly is a key factor in cutting waste time — stepping up production. Here are a few important reasons why America's leading motor makers and design engineers specify Stearns magnetic disc brakes.

Wide size range — for 1/6 to 100-hp. motors, AC or DC. 1.5 to 7500 lb. ft. torque range.

Three housing types — Explosion proof, water and dust-tight, standard. Vertical or horizontal, motor or floor mounting.

Easy adjustment — Single nut for torque, single stud for lining wear. Long-wearing lining easily replaced.

Fast stop — Positive spring action on pressure plates.

Quick release — Instantaneous magnetic pull — eliminates drag.

All major motor manufacturers either supply Stearns brakes exclusively or furnish on request. Write for full details. 1057

MAGNETIC EQUIPMENT FOR ALL INDUSTRY

STEARNS MAGNETS

STEARNS MAGNETIC, INC.
653 South 28th Street, Milwaukee 46, Wisconsin

For more details circle NED-1121 K3 on enclosed inquiry slip

TINS ALL METALS

Difficult tinning problems are being solved with a new powdered solder containing flux, called Farco Tinning Compound which permits jobs heretofore considered impossible, such as tinning cast iron water jackets and cylinder heads, cast steel bearings, pipes, cylinders and stainless steel equipment. The powerful chemical formula will lift the oxides from aluminum, and on other metals is more drastic than ordinary acids. Makes it possible to lift the scale and tin black iron in one operation. Stability of the new powder makes it possible to judge heat on large bearings by its action in turning liquid when proper temperature for tinning is reached. Although strong enough to remove scale, dirt, and tin rusty surfaces thoroughly, it is completely stable and will not liquefy in can. When used on gasoline motors, Diesel and marine engine bearings it is reported to increase performance life 100%. The compound may be applied with either torch or soldering iron depending on thickness of metal, and any good grade of solder may be used. Packaged in 1½ lb. cans, price $3.00 f.o.b. *Advt.*

FARRELLOY CO.

1246 North 26th St. Phila. 21, Pa.

For more details circle NED-1122 K3 on enclosed inquiry slip

NoDrip ...STOPS CONDENSATION DRIP!

NoDRIP PREVENTS RUST in addition to stopping drip and keeping floors dry.

ANYONE CAN APPLY Brush, trowel or spray NoDrip on tanks, condensers, suction lines, vats, pipes, walls, ceilings, etc. NoDrip adheres to metal, concrete, brick, plaster. It forms a seamless covering that is effective as soon as dry. Acid, alkali and brine resistant.

Interesting 32-page Handbook shows what NoDrip is and what it does. It's free. Send coupon today.

☐ SEND NoDRIP HANDBOOK
NAME .....
COMPANY .....
ADDRESS .....
CITY ..... STATE .....

J. W. MORTELL CO., 526 BURCH ST., KANKAKEE, ILLINOIS

For more details circle NED-1123 K3 on enclosed inquiry slip

New Processes & Materials

BELT FASTENERS & TOOLS for making V-belt of any length

Everything needed to make up V-belts of any length is found in the Alligator V-belt drive units. Introductory units contain open-end V-belting, fasteners and tools and replacements units contain belting and fasteners. Units are available for A, B, C and D drives. Made by **Flexible Steel Lacing Co.**, 4607 Lexington St., Chicago 44, Ill.

For more details circle NED-1124 K3 on enclosed inquiry slip

TANTALUM STRIP now available in thin gages and foils

Precision-rolled to close tolerances and to thin gages and foils. Tantalum strip is now available to commercial users. The metal is corrosion-resistant and nonmagnetic, and possesses tensile properties comparable with those of cold-rolled steel. Typical uses for the strip include high precision instrument condensers, amplifiers, electronic oscillators, chlorination apparatus and processing condensers. It is available up to 6-in. wide and down to 0.0005-in. thick, with tolerances as close as plus or minus 0.0001-in. Made by **American Silver Co.**, Industrial Div., Dept. NED, 36-07 Prince St., Flushing 54, N. Y.

For more details circle NED-1125 K3 on enclosed inquiry slip

GLASS FIBER PANELS are fire-resistant and translucent

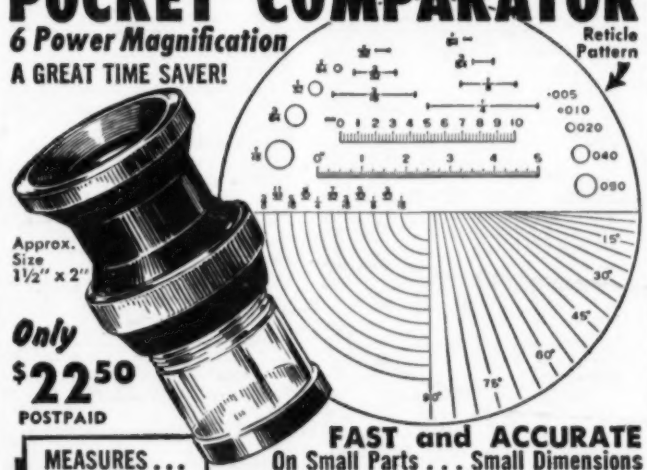
Designed for use in critical fire areas, Alsynite #200-FR Fiberglas panels are translucent, fire-resistant and self-extinguishing. They are made by combining resins and Fiberglas under heat and pressure, and are available in standard corrugations and flat sheets, and in three stable colors: maize, light green and opal. Made by **Alsynite Co. of America**, Dept. 12, 4654 DeSoto St., San Diego 9, Calif.

For more details circle NED-1126 K3 on enclosed inquiry slip

CHECK, MEASURE, INSPECT with this HANDY POCKET COMPARATOR

6 Power Magnification

A GREAT TIME SAVER!



Only $22.50 POSTPAID

MEASURES...
✓ ANGLES
✓ RADII
✓ CIRCLES
✓ LINEAR DIMENSIONS in both decimal inches and millimeters

FAST and ACCURATE On Small Parts ... Small Dimensions

First time available at such low price! EDSCORP POCKET COMPARATOR. Fine, imported measuring magnifier—for fast, accurate inspection of intricate parts without expensive equipment. Used to check layouts, machining on tools, dies, gauges—to check threads, chamfers, small holes. In optical work for checking flaws such as bubbles, seeds, scratches, pits and digs. For scientists—in determining width of spectrograph lines. This instrument comes in protective leather case. We guarantee complete satisfaction or your money back.

WE'LL SHIP ON 10-DAY TRIAL OFFER *Attach Coupon to Company Letterhead*

EDMUND SCIENTIFIC CORP., 306 E. Gloucester Pike, Barrington, N. J.
Please ship EDSCORP Pocket Comparator Stock No. 30,061-AE on 10-day Trial Offer
☐ Check is enclosed in amount $22.50. ☐ Bill on open account.
Name .....
Company .....
Address .....
City ..... *Zone* ..... *State* .....

For more details circle NED-1127 K3 on enclosed inquiry slip

FINISHING PROBLEM?

Switch to Black & Decker POWER!

B & D SANDERS

3 models, 7" and 9" disc diam., standard and heavy-duty types

B & D ELECTRIC SANDERS drive abrasive discs, saucer grinding wheels, "Whirlwind" wire cup brushes, planning and gouging heads — to speed up sanding metal and wood; grinding down welds and casting ridges; cleaning castings, tanks, vats, sheet metal and soldered joints; surfacing timbers. B&D-built universal motors for dependable service. Match-lapped, spline-mounted spiral bevel gears for smooth, quiet flow of power. Perfect balance for easier handling. See your nearby B & D Distributor for a demonstration. Write for free catalog to: THE BLACK & DECKER MFG. CO., 609 Pennsylvania Ave., Towson 4, Md.

LEADING DISTRIBUTORS EVERYWHERE SELL

Black & Decker PORTABLE ELECTRIC TOOLS

For more details circle NED-1128 K3 on enclosed inquiry slip

A-F LIVE RAIL* "SINGLES" GIVE LOWEST COST MOVEMENT TO PRODUCTION

100% PORTABLE
- Lightest Weight
- Lowest Cost
- Most Versatile
- Stronger • Safer

. . . like an extra crew, *Live Rails* may be quickly, easily moved to any spot and set up as you wish to move any flat bottomed object. No need to pay for rows of needless wheels if just 2 Live Rails will do the job. Available in 5 ft. and 10 ft., straight and curved. Also complete sections . . . Your best wheel-style portable buy. Write for prices — today.

LIVE RAIL*

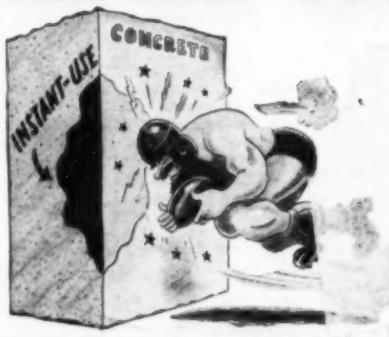
** Design and Mechanical Patents Pending*

THE ULTRA-PORTABLE WHEEL CONVEYOR

A-F THE ALVEY-FERGUSON COMPANY
34 Disney Street Est. 1901 Cincinnati 9, Ohio
Also Engineers All Types of Conveying Systems

For more details circle NED-1129 K3 on enclosed inquiry slip

REPAIR CONCRETE WITH INSTANT SETTING PATCH



TEST IT ON TRIAL OFFER

TOUGH AS NAILS! FAST!

Repair broken factory floors without [illegible] Simply shovel INSTANT-USE into hole or [illegible] No waiting! INSTANT-USE bonds [illegible] a feather edge. It's tough. Wears like [illegible] Install complete overlay where floors are bad [illegible] indoors or out. Immediate shipment [illegible]

MAIL COUPON for TRIAL OFFER [illegible]

INSTANT USE

FLEXROCK COMPANY (Offices in [illegible])
3603 Filbert St., Philadelphia 4, Pa.

Please send me complete INSTANT-USE information, details of TRIAL ORDER PLAN and HAND BOOK OF BUILDING MAINTENANCE—no obligation. (Clip and attach Coupon to Co. letterhead).

Name .....
Title .....
Company .....
Address .....

For more details circle NED-1130 K3 on [illegible]